

Effective Problem Statements &
Research Questions
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Overview

The purpose of this paper is to give the researcher an overview of how to develop simple yet effective Problem Statements and Research Questions that will get them moving quickly and in the right direction. The Problem Statement can be thought of as the cornerstone of the research proposal. It is responsible for establishing broadly what area will be studied with the general problem and narrowly focusing on a section of that broad area with the specific problem. The Problem Statement also provides clear and direct support from the current literature that demonstrates that the problem does exist. Research Questions on the other hand provide the basis of inquiry for your study. They are broad questions that will be used to guide the research in addressing the Problem Statement. The simple rule for developing Research Questions is to make sure to ask questions that address all the factual assertions made in the Problem Statement, but none that ask questions that are outside of the Problem Statement. Research Questions also guide in the choice of methodology for the study as will be seen below.

The Problem Statement

All good business research begins with a clearly articulated and focused Problem Statement!

In order to build a strong and focused problem statement that is related to the field of study for the research project just follow the method discussed below. This method is based upon a simple three part presentation; the beginning - the general problem, the middle - supporting statements, the end - the specific problem. The Problem Statement example below is based upon

a business research study in the field of Leadership. None of the citations provided are real and are only intended to illustrate the process.

The First sentence

The general problem to be addressed is _____ resulting in _____.

The general problem sentence must be an overarching problem clearly related to the field of study that can be proven to exist based upon current (last five years) literature. It is also important to note what a general problem sentence is not:

- A general problem sentence is not a question - The general problem to be addressed is why leaders are ineffective resulting in ...
- A general problem sentence is not a simple declarative - The general problem to be addressed is leaders are ineffective resulting in ...

A good general problem sentence addresses a specific issue in a way that is clear, descriptive, and self-explanatory. Another way to think about a problem statement is that it generally describes a situation we don't want to happen that is, a situation that is not happening that we do want, or a situation that that is happening but not to the desired level. As can be seen from both of the examples below, there is no confusion about what the broad focus of the study is intended to be:

- The general problem to be addressed is the failure of leaders to gain employee support for new initiatives resulting in ...

- The general problem to be addressed is the lack of formal leadership training in for new managers resulting in ...

The consequences (resulting in ...) should provide a broad but clear statement regarding the negative outcomes that result from the existence of the general problem:

- ... resulting in the inability of organizations to make critical changes.
- ... resulting in the reduction of organizational performance.

Putting all of that together we could get: The general problem to be addressed is the failure of leaders to gain employee support for new initiatives resulting in the inability of organizations to make critical changes.

Next three or four sentences

In this middle section the researcher will need to provide current literature support for the assertions made in the general problem sentence. In the example above, the assertion was that leaders are failing to gain employee support for new initiatives. Current literature sources would be scholarly articles or monographs published in the last five years. If the source is older than that the problem might not be prevalent or it might have been solved. So, develop active voice declarative statements from current literature that support the assertions made in the first sentence like the fictitious ones below:

- Smith (2017) stated that many high level leaders struggle with effectively projecting an engaging vision for a new initiative which makes it difficult to gain employee buy-in.

- In a recent study, Jones (2015) found that employee buy-in was the most critical determining factor in projecting future success of organizational change.
- Herbert (2016) supported these views by explaining that the ability of an organization to make critical strategic changes is directly related to the leader's ability to foster organization-wide support of the initiative.

Last sentence

The specific problem to be addressed is (possible / potential) _____ within the _____ (possible / potential) resulting in _____.

The specific problem must be a narrowly focused subset of the general problem that is practical to study within the constraints of the program. In the example we are using, the researcher is not trying to study the entire world of organizations and leaders, just a subset that will give insight into the entire world. In the examples below, the specific problem starts with the same words as the general problem like the first one or a subset of the problem like the last two:

- The specific problem to be addressed is the possible failure of leaders to gain employee support for new initiatives...
- The specific problem to be addressed is the possible failure of leaders to gain executive level support for new initiatives...
- The specific problem to be addressed is the possible failure of leaders to gain executive level support for new product development initiatives...

The focus (within the...) could be based upon an industry, a region, an industry within a region, etc. The determining factor is making it narrow enough to study but broad enough provide enough data for the study:

- ... within the high-tech electronics industry resulting in...
- ... within the south-western United States resulting in...
- ... within the retail clothing industry in the southeastern United States resulting in...

The last part of the specific problem should restate the results from the general problem or a subset of the results from the general problem:

- ... resulting in the possible inability of organizations to make critical changes.
- ... resulting in the possible inability of the organization to make critical product line changes.

Putting all of the pieces above together into a single sentence: The specific problem to be addressed is the possible failure of leaders to gain executive level support for new product development initiatives within the retail clothing industry in the southeastern United States resulting in the possible inability of organizations to carry out critical product line changes.

Rephrasing it to make it flow better: The specific problem to be addressed is the possible failure of leaders within the retail clothing industry in the southeastern United States to gain executive level support for new product development initiatives resulting in the possible inability of organizations to carry out critical product line changes.

Consider a Bridge

A nice additional touch would be a bridge sentence that takes the reader from the general problem and its supporting sentences to the specific problem. With the specific problem sentence developed, this would be the time to consider a bridge like the fictitious source below. Find a current literature source that supports the existence of the problem in the area focused on with the specific problem if one is available. This sentence will come in the middle section of the Problem Statement after the supporting sentences for the general problem sentences and before the specific problem sentence. While this part of a problem statement is not essential, it can make the flow better:

- Adams (2017) found that the inability to gain employee support for new initiatives was a particular challenge in the retail clothing industry.

Assembling the Final Product

What has been developed is a strong and focused problem statement that is supported by the current literature and is 250 words or less. This provides a solid foundation for the study and clearly defines the subject and focus of the study.

Example Problem Statement

The general problem to be addressed is the failure of leaders to gain employee support for new initiatives resulting in the inability of organizations to make critical changes. Smith (2017) stated that many high level leaders struggle with effectively projecting an engaging vision for a new initiative which makes it difficult to gain employee buy-in. In a recent study, Jones (2015) found that employee buy-in was the most critical determining factor in projecting future success of organizational change. Herbert (2016) supported these views by explaining that the ability of

an organization to make critical strategic changes is directly related to the leader's ability to foster organization-wide support of the initiative. Adams (2017) found that the inability to gain employee support for new initiatives was a particular challenge in the retail clothing industry. The specific problem to be addressed is the possible failure of leaders within the retail clothing industry in the southeastern United States to gain executive level support for new product development initiatives resulting in the possible inability of organizations to carry out critical product line changes.

The Research Questions

All good business research is guided by a comprehensive and clear set of Research Questions!

As previously stated, Research Questions form the basis of inquiry for the study and are broad questions that will be used to guide the researcher in addressing the Problem Statement. Research Questions also guide in the choice of methodology for the study. Qualitative Research Questions are those that seek to understand or explain while Quantitative Research Questions seek to relate or measure. Research Questions are the questions the researcher seeks to answer and should not be confused with Interview Questions or Survey Questions which are directed towards participants as a part of data collection during the field study.

Here are some examples:

- Qualitative Research Question: What is the role of leadership in employee retention in the manufacturing industry?

- Quantitative Research Question: What is the relationship between transformational leadership style and employee retention within the manufacturing industry?
- Interview Questions: Please describe your experience with your organizational leadership. What role has organizational leadership played in your decision-making process to continue with or leave the organization?
- Survey Question: Transformational leaders inspire employees leading to better employee retention (Answer 1 - 5). Scale 1 - Highly Disagree, 2 - Disagree, 3 - Neutral, 4 - Agree, 5 - Strongly Agree

The first question is open-ended and allows for the discovery (understanding) of reasons (factors behind) why employees might leave the industry. This is exploratory rather than measureable, and therefore no statistical test can be employed and no testable hypothesis can be developed. Taken together, that is what makes it a solid qualitative research question.

The second question seeks to quantify (measure) the relationship between two variables; transformational leadership and employee retention. Unlike the first question where the factors were not known, here the factors (variables) are known. That means that this relationship can be statistically evaluated based upon a testable hypothesis. In this case: H_0 There is no statistically significant relationship between transformational leadership style and employee retention. The ability to develop testable hypotheses is what makes for a good quantitative research question.

The third question seeks to extract rich information from a research participant and might be used in a study based upon the Qualitative Research Question above. This is not a research question!

The fourth question seeks to quantify a participant's feelings about a specific topic to provide measureable data. This would be a great survey question to support a study based upon the Quantitative Research Question above. This is not a research question!

Developing a solid set of Research Questions

As stated above, the research questions should inform the problem statement. The researcher should start with the specific problem and take it apart to find out what areas need to be explored. Using the Problem Statement example above, the following need to be addressed:

- The failure of leaders to gain executive level support for new product development initiatives.
- The failure of product line changes
- The retail clothing industry

That's it. The southeast United States is a boundary for the study to narrow the focus although you could ask about this region of the country if there are relevant differences. With this list established, the researcher can develop the Research Questions. For qualitative studies this will typically be between three and four broad questions and sub-questions (as appropriate) that dig into the things you need to know about. For quantitative studies this will typically be up to three questions that dig into relationships or measurements.

Qualitative Research Question Examples

1. Why do leaders fail to gain executive level support for new product development initiatives?
 - 1.a. What leadership actions or behaviors contribute to failure to gain support?
 - 1 b. What leadership actions or behaviors contribute to success in gaining support?
2. In what way are new product development initiatives different than other change initiatives?
 - 2.a. How do those differences manifest themselves in the ability of the leader to gain support?
3. What cultural elements are present in the retail clothing industry that positions organizations for success in implementing change initiatives?

You will note that the first research question looks at both the reasons for failure and for success. It is important to always come at a topic from both perspectives. Questions two and three are open and will gain information related to successes and failures by asking how. It should also be noted that the open ended nature of the inquiry has the ability to generate rich data that is not bounded by preconceived notions regarding the topic.

Quantitative Research Question Examples

1. What is the relationship between leadership style and the leader's ability to gain executive level support?
2. What is the relationship between leadership style and the organization's ability to successfully engage in change initiatives?

It should be noted that these questions are focused on the relationship between known factors (variables). In the first question the variables are leadership style and ability to gain

support and in the second on the variables are leadership style and the ability of the organization to change. Each of these could be used to develop testable null hypotheses. As an example, the second Research Question could be used to develop these null hypotheses:

- There is no statistically significant relationship between passive avoidant leadership style and the organization's success in completing change initiatives.
- There is no statistically significant relationship between transactional leadership style and the organization's success in completing change initiatives.
- There is no statistically significant relationship between transformational leadership style and the organization's success in completing change initiatives.

Summary

As stated earlier, all good business research begins with a clearly articulated and focused Problem Statement and is guided by a comprehensive and clear set of Research Questions. Keep in mind that the goal here is not to develop a literary masterpiece; instead the goal is to establish clearly stated foundation upon which the rest of the research project can be built. It is only with the Problem Statement and Research Questions in place, that it is possible to develop the conceptual / theoretical framework, methodology, and topical outline for the literature review. The critical nature of these first two steps in the research journey cannot be overstated. It is essential that the researcher take the necessary time here to get this right or the research project will flounder or not develop at all.

Happy Researching!

Dr. Moore