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Let's Stop the Madness Part 2: Understanding the Difference Between Limitations vs. Delimitations

D. Anthony Miles

ABSTRACT

The purpose of this article is to provide insight on the distinct differences between limitations and delimitations. The confusion between limitations and delimitations have become an increasingly big problem for both experienced researchers and novice researchers. This confusion is deep seated has been a problem with doctoral students. There is a tendency to use the terms interchangeably. The confusion is prevalent at alarming levels. Many researchers are confused on the differences between the two terms. They are not the same. Thus, this article tries to provide some understanding of the two terms and provides some clear definitions and examples that tend to be confusing. This article provides some practical importance to researchers in social sciences. This article provides some valuable knowledge and insight to researcher on the correct use of these two terms. First, the article provides some clear definitions on limitations and delimitations. Second, this article provides examples of the differences and characteristics between the two terms. This article will provide much needed clarity to many researchers that are confused by the two terms and misused them in context.

Introduction

In my years of work with many doctoral students, I have found there is still a prevailing confusion between the terms, limitations and delimitations. I have seen this be the case with both experienced researchers and novice researchers. There is a dearth in the research methods class that is required for doctoral students. After all of my years of working and editing the work of doctoral students, there still seems to be a prevailing problem. The problem is most of them do not know the difference between the two terms, limitations and delimitations. They either have never learned the differences between the two terms or they learned alternate definitions that further confuse them. However, I think I have found a useful definition and examples to help students and researchers understand the differences between the two terms. The outline of the article will provide information on the differences between the two terms. First, the article will provide clear definitions of a limitation and delimitation. Second, the article will provide some examples of how to use them in a sentence and paragraph. Last, the article will provide examples of them from journal articles and studies.

Definition of a Limitation

Limitations are defined as *constraints to your study based on the research methodology and design*. Limitations are constraints you cannot control in your study. Primarily, limitations deal with the constraints to the research method (Miles, 2017).

With limitations, your research method and design remain constant. For example, 30 years from now, a researcher who wishes to replicate your study can do so with using the same research method. The future researcher using same research method will face the same limitations you faced. These have to do with means you have chosen for gathering and analyzing data. Limitations are those restrictions created by your methodology. Limitations are the built-in limits of the method you use to explore your question. If you are thoughtful and analytical about your chosen method, you should have no trouble identifying the design factors that might produce inaccurate or misleading data and possibly lead to mistaken conclusions (Bryant, 2004).

Another definition of a limitation is that they are design flaws. Limitations identify potential weaknesses in the study's research design and methodology. Limitations tend to act as an anticipator of the study's flaws (Calabrese, 2006). Limitations are restrictions in the study over which you have no control. For example, your study may be limited to a narrow segment of the population. You want to study them and may be limited in the research method you choose to use (Rudestam & Newton, 2007). Further, limitations are constraints outside of the researcher's control and are inherent to the study that could affect the generalizability of the results (Terrell, 2016).

A limitation is a factor that may or will affect the study but is not under the control of the researcher. In such studies that use questionnaires, a common limitation is the willingness of the individuals to respond at all, to respond in a timely fashion, and to respond accurately. Limitations are important to the possible effects on the outcomes of the study, and they are

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not controlled by the researcher. Limitations typically surface as variables that cannot be controlled by the researcher but may limit the or affect the outcome of the study. Limitations can become a problem to students if they are not specified (Mauch & Park, 2003).

When the researcher discusses the limitations, they are discussing the possible and real weaknesses to his or her research design. Limitations described by the researcher are those that may or did affect the study's validity or findings. The limitations tend to address the researcher's awareness and shortcomings to their research design and methodological approach to the study, thus adding to the researcher's credibility (Calabrese, 2009). See Figure 1. Also see Examples 1 to 3.

Table 1. Introducing: The Statement Grid – for Limitations

Overall Statement: “The study was limited by certain conditions that were identified for this research inquiry. The researcher identified three major limitations as a basis for this study.”		
Limitation 1: First, a key limitation was the use of self-reported data. Data reflected the owner's perception of domestic violence, which may have been distorted or incomplete. Some of the participants may not have properly comprehended the subject matter.	Limitation 2: Second, another key limitation was time constraints. The window of opportunity to collect the data was very limited (less than a month). It would have been more beneficial to take more time to collect additional surveys.	Limitation 3: Last, another key limitation was length of the survey instrument. The instrument was too long, and participants refused to complete survey. There were a number of incomplete surveys that was attributed to the length and time to fill out the survey [Miles, 2016a].

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Figure 1. Formula for Limitations

Limitations = Methodology

[Example 1]

Limitations. Limitations are comprised of the restrictions implemented by the researcher's choice of methodology. These are factors in the study that cannot be controlled by the researcher. As a basis for the study, the limitations were threefold.

1. The first limitation in this study is the instrumentation. This study used an instrument that was closed and did not have open-ended questions.
2. The second limitation is the data collection. This study used aggregated data that was collected from the state in a publicly accessible medium. This is limited in descriptive statistics.
3. The third limitation was the course. Teen Leadership is one of several different character education opportunities offered throughout the state. Further investigation into other programs may offer different insights [Zeig, 2019].

[Example 2]

Limitations. Limitations are potential weaknesses that are out of the researcher's control. Limitations are inherent limits from the research methodology and research design. These areas make the study a scientifically rigorous investigation. As a basis for this study, the researcher identified three limitations:

- First, this study was limited to personal interviews with the participants. This limits the length of data collected and thus has a time constraint as to how much data can be collected during a period of time.
- The second limitation is the lack of closed-ended questions, which result in data that is not empirically quantifiable.
- The third limitation is the method of data collection. All responses are self-reported, and the researcher assumes all answers are truthful [Kwapong, 2019].

[Example 3]

Limitations. Limitations focus commonly on internal and external validity of the study. Internal validity addresses the rigorous conduct of the study, while external validity focuses on applicability of the findings to larger populations (generalization). Limitations are inherent limits from the research methodology and research design. These areas make the study a scientifically rigorous investigation. The following limitations are present in this study:

1. The first limitation is the methodology. This study uses the survey design as a basis for research. This is a limitation because the survey questions may not collect all the necessary data. To minimize the limitation of the methodology, the researcher will collect as much data as possible to have an excellent representation of the population.
2. The second limitation is a time-constraint limitation. Employees may not understand the survey questions because of time-constrain as the survey has too many questions. To minimize time-constrain, the researcher will give the necessary time to collect the data.
3. The third limitation is the study will be held only in the day shift and night shift. To minimize the shift limitation, the researcher will obtain data from the most population possible during shifts.
4. The last limitation is the instrumentation to be used to conduct the research. The instrument to be used is the questionnaire of the Baldrige National Quality Program survey with demographics questions added. To minimize the instrumentation limitation, reliability data will be present showing the instrument is reliable to conduct the proposed study [Morales, 2019].

Definition of a Delimitation

A second problem that doctoral students have is with the meaning of delimitations. As mentioned earlier, they mistake delimitations and limitations as though they are interchangeable. This has been a problem with doctoral students.

Delimitations are defined as chiefly concerned with the *scope of the study*. Delimitations describe the scope of the study or establish parameters. Delimitations also prevent you from stating your findings are generalizable to the whole population. Delimitations are self-imposed restrictions to your study compared to limitations which, have inherent restrictions to your methodology (Miles & Scott, 2017).

Another interesting aspect of delimitations is that they imply limitations on the populations, to which the results of the study can be generalized. For example, you may decide to only study males, either because of the theory of your hypotheses are based has not been studied in females or because you have a readily accessible population of males but not females (Rudestam & Newton, 2007). Think of delimitations as self-imposed boundaries that you use to delimit the scope of your study (Calabrese, 2006).

The fact is that delimitations also act as denotations, meaning as a boundary of the study and ways in which the findings may lack generalizability. In considering this, you should examine such concerns as the nature and size of the sample, the uniqueness of the setting, the time period during which the study was conducted and the limitations of the particular methods selected (Glatthorn, 1998).

Delimitations are the factors that prevent you from claiming that your findings are true for all people in all time and places. For a quantitative study, these are the factors that limit generalization. For a qualitative study, these factors that limit the relevancy of your study to other populations or individuals. For example, if you study nurses of Oregon, you will not be able to extend your results to the nurses of Arkansas. The point is that many quantitative studies gather data at a moment in time. For example, if a researcher 30 years from now would seek to replicate your study, then they would have to decide what factors would get in the way. Delimitations would be those factors (Bryant, 2004).

When the researcher uses the term, *delimitation*, that means they will point to how he or she narrowed the study to focus on specific aspects. The researcher will indicate how they will narrow the specific focus of the study by identifying a precise type of research methodology, participant characteristic, context or research site or phenomenon studied during the research (Calabrese, 2009). Furthermore, Delimitations are further limitations actively put into place by the researcher in order to control for factors that might affect the results, or to focus more specifically on a problem (Terrell, 2016).

One strong consideration by the researcher is that delimitations are controlled by the researcher. In some studies, it is common to have a delimitation as to the size or nature of the group questioned. The size might be limited to those working in a region. Size may also be limited by

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percentage in a field or sector. Delimitations help everyone involved think through the design of the study. Delimitations are integral parts of the design because they set boundaries. They tell the readers what will be included, what will be left out and why (Mauch & Park, 2003).

Delimitations detail all aspects of the study that will not be included. This process is exactly one of “walling out” those segments that are beyond the scope and purposes of the study. Delimitations informs readers in a given subject areas will hold certain basic expectations. Readers may want to know: (a) about the criteria for determining the scope of the study; (b) what sources will be used to determine the salient background of the target population ; (c) whether gender differences are important; and (d) how you define “significant others,” to list just a few. However, delimitations will tell the informed readers what not to expect, you should note that you cannot use the section arbitrarily. Furthermore, you cannot exclude those aspects that are somehow difficult to research. You cannot narrow the breadth of the study for your convenience. You cannot use delimitations to exclude logical and credible expectations (Webster, 1998a).

You should use delimitations carefully and conservatively. The following are delimitations typical of many research studies: (a) exclusions related to gender differences; (b) exclusions related to socioeconomic backgrounds; (c) absence of concern for the size of cities, organizations, utility districts or school districts studied; and (d) exclusions related to years’ training or experience (Webster, 1998b). See Figure 2 below. Also see Examples 4 to 6.

Table 2. Introducing: The Statement Grid – for Delimitations

<p>Overall Statement: “This study had some delimitations that restricted the study. The researcher identified four delimitations concerning the scope this study. The study was delimited by certain conditions that were identified for this research inquiry.”</p>			
<p>Delimitation 1: First, the study was delimited to a Los Angeles, area. The results may or may not be generally applicable to other geographic regions.</p>	<p>Delimitation 2: Second, the study was delimited to domestic violence victims (DVV) as the target population of this study in the state of California.</p>	<p>Delimitation 3: Third, the study is delimited itself to using a convenience sample from the Domestic Violence Center in Los Angeles.</p>	<p>Delimitation 4: Lastly, the study was delimited to a population of 25,456. A population sample of 568 DVVs were recruited from the target area participants; Los Angeles, County.</p>

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Figure 2. Formula for Delimitations

Delimitations = Scope

[Example 4]

Delimitations. Delimitations of a study are those characteristics that arise from limitations in the scope of the study (defining boundaries) and by the conscious exclusionary and inclusionary decisions made during the development of the study plan (Simon & Goes, 2013). The delimitations are those characteristics that limit the scope and define the boundaries of your study (ibid). The following delimitations are present at the time this study will be conducted:

1. The study is delimited to air transportation organizations employees and will not assess other types of organizations in the geographical location of Puerto Rico. To mitigate the delimitation of the organizations in where the study will be conducted, the researcher will collect data from the most possible air transportation companies.
2. The study is delimited to organizations in Puerto Rico. To minimize the delimitation of the employees, the study will collect data from employees of all positions within the organization.
3. The study is delimited to floor employees, office employees, and managers at the air transportation organization site. No employees at the high leadership level (CEO, vice presidents of operations etc.) will be assessed in this study [Morales, 2017].

[Example 5]

Delimitations. Delimitations are weaknesses associated with the scope of the studies (Simon & Goes, 2013). While limitations are not within the researcher's control, delimitations are factors that can be controlled. The researcher noted three delimitations that affect this study

- The study is delimited to private Christian institutions in Southern California.
- The study is delimited to students participating in the AIM peer mentoring program.
- The study is delimited to the population sample of 10 international students and 10 domestic students [Kwapong, 2017].

[Example 6]

Delimitations. Delimitations are things over which the researcher has control, such as location of the study. The following delimitations will be present in the current study.

1. The survey of parents is delimited to the Southern New Jersey public schools. Lack of funding prevents the study being conducted over a larger, more widespread region. This limits the geographic range of the sample and in turn impacts the generalizability of the findings. Expanding the range could produce results that are more widely generalizable and applicable to other regions.
2. The study will be delimited to a sample study of 20-25 parents of students who attend New Jersey Public Schools in the South New Jersey region, and are in kindergarten through eighth grade. Although this limits the applicability of this study to parents of high school students. The intent of the study is to focus on the phenomenon of parent involvement, as it exists in lower grades as a foundation to helping students establish sound academic achievement [Forbes, 2017].

Conclusions

This article discussed the confusion between the terms, limitations and delimitations. This article addressed three key points to understanding and differentiation between the two terms, limitations and delimitations. This article highlighted the main definitions of limitations and its characteristics. Also, the article discussed the definition of delimitations and its characteristics. First, the article defined and discussed the meanings between the two terms. Second, the article gave some examples and characteristics between the two terms. Last, the article discussed the differences between the two terms based on research question and data collection method. We hope this article will act as a guide for helping researchers learn and understand the distinct differences between the terms, limitations and delimitations. The researcher hopes to build some foundation for enlightening both experienced and novice researchers on the two terms and lessen the confusion.

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