Writing the Purpose Statements in Qualitative, Quantitative and Mixed Method Research

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Abstract: This paper aims at emphasizing the importance of a purpose statement in a scholarly study. This statement elevates the central idea in a study, and as such it is the most important statement in a research proposal or study. In writing a qualitative purposes statement, a researcher needs to identify a single central phenomenon and to pose a tentative definition for it. The researcher has to employ action words such as "discover," "develop," or "understand." In the process, non-directional language is used, and the inquirer mentions the strategy of inquiry, the participants, and the research site for the study. In a quantitative purpose statement, the researcher mentions the theory being tested as well as the variables and their relationship or comparison. It is important to position the independent variable first and the dependent variable second. The researcher mentions the strategy of inquiry as well as the participant and the research site for the investigation. In some purpose statements, the researcher also defines the key variables used in the study. In a mixed method study, the type of strategy is mentioned as well as a rationale for the type of strategy, such as whether the data are collected concurrently or sequentially. Further, many elements of both good qualitative and quantitative purpose statements are included in the statement.
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The purpose statement is the overall objective or intent of the study. In some projects it is called the "study aim." It is the most important statement in your qualitative study. It is a statement that conveys the essence of a project. A central question is a single general question that reframes the purpose into a specific question. This central question is the broadest question that can be asked. It is unlike quantitative questions, in which authors try to narrow the questions down to specific variables that can be related. It is helpful to think about the qualitative central question by asking yourself, "What is the broadest question I can ask about my central phenomenon?" The central phenomenon is the core idea being explored in a qualitative study. It needs to be stated in a way that is not too broad (e.g., experiences of individuals) or too narrow (e.g., identity when at work). It needs to rest somewhere in the middle, such as the "cultural identity" of individuals. The central phenomenon is stated within both the purpose statement and the central question. The central question can then be made more specific by writing five to seven sub-questions that subdivide the central question into parts or topics. If you were to ask questions about your central phenomenon when you explore it, what subtopics would you ask participants in your study? These sub-questions then become the major questions used during your qualitative data collection procedures. They can become key questions asked during interviews, questions to reflect on yourself during observations, or questions to ponder as you examine documents, pictures, videos, photographs and other forms of

audiovisual materials.

A purpose statement announces the purpose, scope, and direction of the paper. It tells the reader what to expect in a paper and what the specific focus will be. Common beginnings include: "This paper examines . . .," "The aim of this paper is to . . .," and "The purpose of this paper is to . . ." A purpose statement makes a promise to the reader about the development of the argument but does not preview the particular conclusions that the writer has drawn.

A purpose statement usually appears toward the end of the introduction. The purpose statement may be expressed in several sentences or even an entire paragraph. A purpose statement is specific enough to satisfy the requirements of the assignment. Purpose statements are common in research papers in some academic disciplines, while in other disciplines they are considered too blunt or direct. If you are unsure about using a purpose statement, ask your instructor.

This paper will examine a qualitative purpose statement, a quantitative purpose statement, and a mixed method purpose statement.

LITERATURE REVIEW

Qualitative Research

Qualitative research is also described as an unfolding model that occurs in a natural setting that enables the researcher to develop a level of detail from high involvement in the actual experiences (Creswell, 1994). One identifier of a qualitative research is the social phenomenon being investigated from the participant's viewpoint. There are different types of research designs that use qualitative research techniques to frame the research approach. As a result, the different techniques have a dramatic effect on the research strategies explored.

What constitutes qualitative research involves purposeful use for describing, explaining, and interpreting collected data. Leedy and Ormrod (2001) alleged that qualitative research is less structured in description because it formulates and builds new theories. Qualitative research can also be described as an effective model that occurs in a natural setting that enables the researcher to develop a level of detail from being highly involved in the actual experiences (Creswell, 2003). Qualitative research is conducted within a poststructuralist paradigm. There are five areas of qualitative research: case study, ethnography study, phenomenological study, grounded theory study, and content analysis. These five areas are representative of research that is built upon inductive

reasoning and associated methodologies.

Qualitative research builds its premises on inductive, rather than deductive reasoning. It is from the observational elements that pose questions that the researcher attempts to explain. The strong correlation between the observer and the data is a marked difference from quantitative research, where the researcher is strictly outside of the phenomena being investigated. There is no beginning point of truth or any established assumptions from which the researcher can begin (Leedy and Ormrod, 2001). This empirical research is data collected from the senses and is used to explain phenomena relevant to social behaviors in new and emerging theories. In addition to the distinct differences between quantitative and qualitative research designs, notable differences have also been identified in each respective research methodology. The following sections will briefly describe the qualitative research methodology.

Quantitative Research

Quantitative research involves the collection of data so that information can be quantified and subjected to statistical treatment in order to support or refute "alternate knowledge claims" (Creswell, 2003, p. 153). Creswell, (2002) asserts that quantitative research originated in the physical sciences, particularly in chemistry and physics. The researcher uses mathematical models as the methodology of data analysis.

Three historical trends pertaining to quantitative research include research design, test and measurement procedures, and statistical analysis. Quantitative research also involves data collection that is typically numeric and the researcher tends to use mathematical models as the methodology of data analysis. Additionally, the researcher uses the inquiry methods to ensure alignment with statistical data collection methodology. There are three broad classifications of quantitative research: descriptive experimental and causal comparative (Leedy and Ormrod, 2001). The descriptive research approach is a basic research method that examines the situation, as it exists in its current state. Descriptive research involves identification of attributes of a particular phenomenon based on an observational basis, or the exploration of correlation between two or more phenomena.

During the experimental research, the researcher investigates the treatment of an intervention into the study group and then measures the outcomes of the treatment. There are three types of exploratory approaches: pre-experimental, true experimental, and quasi-experimental (Leedy & Ormrod, 2001). The pre-experimental design involves an

independent variable that does not vary or a control group that is not randomly selected. The true experimental design, which provides a higher degree of control in the experiment and produces a higher degree of validity. The true experimental designs result in a systemic approach to quantitative data collection involving mathematical models in the analyses. Whereas, the quasi-experimental design involves nonrandom selection of study participants. Therefore, control is limited and true experimentation is not possible. Since the variable cannot be controlled, validity may be sacrificed.

In the causal comparative research, the researcher examines how the independent variables re affected by the dependent variables and involves cause and effect relationships between the variables. The factorial design focuses on two or more categories with the independent variables as compared to the dependent variable (Volt, 1999). The causal comparative research design provides the researcher the opportunity to examine the interaction between independent variables and their influence on dependent variables.

Mixed Method

Mixed methods may be defined as 'research in which the investigator collects and analyses data, integrates the findings and draws inferences using both qualitative and quantitative approaches or methods in a single study' (Tashakkori and Creswell, 2007, p.4). Research is not restricted by the use of traditional approaches to data collection but is guided by a foundation of enquiry that underlies the research activity. A mixed methods study is one that includes a qualitative and quantitative dimension, but difficulties often arise when the researcher attempts to articulate how the two elements relate to one another (Tashakkori and Creswell, 2007).

There is an inconsistency among researchers about what constitutes mixed methods research (Tashakkori and Creswell, 2007). Some interpretations view mixed methods as the collection and analysis of quantitative and qualitative data. More contemporary writings in this area had sought to develop an understanding of the importance of complete integration of the two approaches (Creswell and Clark, 2007). Tashakkori and Creswell (2007) argue that as mixed methods research is still evolving, the discussion of what it actually is should be kept open. Similarly, Johnson, et al. (2007) suggest that the definition of mixed methods research will change over time as this research approach continues to grow.

THEORETICAL FRAMEWORK

A Qualitative Purpose Statement

A good qualitative purpose statement contains important elements of qualitative research, uses research words drawn from the language of that inquiry (Schwandt, 2001), and employs the procedures of an emerging design based on experience of individuals in a natural setting. Thus, one might consider several basic design features for writing this statement:

1. Use words such as "purpose," or "objective" to signal attention to this statement as the central controlling idea in a study. Set the statement off as a separate sentence or paragraph and use the language of research by employing words such as "The purpose (or intent or objective) of this study is (was) (will be) …" Researchers often use the present or past verb tense in journal articles and dissertation, and the future tense in proposals because researchers are presenting a plan for a study.
2. Focus on a single phenomenon (or concept or idea). Narrow the study to one idea to be explored or understood. This focus means that a purpose does not convey "relating" two or more variables or "comparing" two or more groups, as it typically found in quantitative research.
3. Use action verbs to convey how learning will take place. Action verbs and phrases such as "describe, "understand," "develop," "examine the meaning of," or "discover," keep the inquiry open and convey an emerging design.
4. An emerging design is also enhanced by non-directional language rather that predetermined outcome. Use neutral words and phrases, such as exploring the "experiences of individuals" rather than the "successful experience of individuals." Other words and phrases that may be problematic include "useful," "positive," and "informing." All words that suggest an outcome that may or may not occur. McCracken (1988) refers to the need in qualitative interviews to let the respondent describe his or her experience. Interviewers (or purpose statement writers) violate the "law of non-direction" in qualitative research (McCracken, 1988, p.2) by using words suggesting a directional orientation.
5. Provide a general working definition of the central phenomenon or idea. Consistent with the rhetoric of qualitative research, this definition is not rigid and set, but tentative and evolving throughout a study based on information from participants.

Hence, a writer might use the words, "A tentative definition at this time for _____ (central phenomenon) is …" It should be also noted that this definition is not to be confused with the detailed "definition of terms" section found later in some qualitative proposals. The intent here is to convey to readers at an early stage in a proposal or research study a general sense of the central phenomenon so that they can better understand information that will unfold in the study.

6. Include words denoting the strategy of inquiry to be used in data collection, analysis, and the process of research, such as whether the study will use an ethnographic, grounded theory, case study, phenomenological, or narrative approach.
7. Mention the participants in the study, such as whether the participants might be one or more individuals, a group of people, or an entire organization.
8. Identify the site for the research, such as homes, classrooms, organizations, programs, or events. Describe this site in enough detail so that the reader will know exactly where a study will take place.

Although considerable variation exists in the inclusion of these points in purpose statements, a good dissertation or thesis proposal should mention all of them. To assist in designing a purpose statement, the writers include a "script" that should be helpful in drafting a complete statement. A "script," contains the major words and ideas of a statement and provides space for the researcher to insert information that relates to a project. The "script" for a qualitative purpose statement is this:

> *The purpose of this _____ (strategy of inquiry, such as ethnography, case study, or other type) study is (was? will be) to _____ (understand? describe? develop? discover?) the _____ (central phenomenon being studied) for_____ (the participants, such as the individual, groups, organization) at _____ (research site). At this stage in the research, the _____ (central phenomenon being studied) will be generally defined as _____ (provide a general definition).*

A Quantitative Purpose Statement

Quantitative purpose statements differ considerably from the qualitative models in terms of the language and a focus on relating or comparing variables or constructs. A variable refers to a characteristic or attribute of an individual or an organization that can be measured or observed and that varies among the people or organization being studied (Creswell, 2002). A variable typically will vary in two or more categories or on a

continuum of scores. Psychologists prefer to use the term *construct* (rather than *variable*), which carries the connotation of more of an abstract idea than a specifically defined term. However social scientist typically uses the term *variable*, and it will be employed in this discussion. Variables often measured in studies include gender, age, socio-economic status (SES), and attitudes or behaviors such as racism, social control, political power, or leadership. Several texts provide detailed discussions about the types of variables one can use and their scale of measurement. Variables are distinguished by two characteristics: temporal order and their measurement (or observation).

Temporal order means that one variable precedes another in time. Because of this time ordering, it is said that one variable affects or "causes" another variable, though a more accurate statement would indicate "probable causation." When dealing with studies in the natural setting and with humans, researchers cannot absolutely "prove" cause and effect. This time ordering causes researchers in quantitative approached to think "left to right" and order the variables in purpose statements, research questions, and visual models into left to right, cause and effect, presentations. Thus,

(1) *Independent variables* are variables that probably cause, influence, or affect outcomes. They are called treatment, manipulated, antecedent, predictor variables.

(2) *Dependent variables* are variables that depend on the independent variables; they are the outcomes or results of the influence of the independent variables. Other names for dependent variables are criterion, outcome, and effects variables.

(3) Intervening or mediating variables "stand between" the independent and dependent variables, and they mediate the effects of the independent variable on the dependent variable. For example, if students do well on a research method test (dependent variable) that result may be due to (a) their study preparation (independent variable) and/or (b) their organization of study ideas into a framework (intervening variable) that influenced their grade on the test. The mediating variable, "organization of study," stands between the independent and dependent variables.

(4) Two other types of variables are control variables and confounding variables. Control variables play an active role in quantitative studies. These variables are special type of independent variable that are measured in a study because they potentially influence the dependent variable. Researchers use statistical procedures (e.g., analysis of covariance) to control for these variables. They may be demographic or personal variables that need to be "controlled" so that the true influence of the independent variable on the dependent can be determined. Another

type of variable, a *confounding* (or *spurious*) variable is not actually measured or observed in a study. It exists, but its influence cannot be directly detected in a study. Researchers comment on the influence of confounding variables, after the study has been completed, because these variables may have operated to explain the relationship between the independent variable and dependent variable, but they were not or could not be easily assessed.

The design of a quantitative purpose statement begins with identifying the proposed variables for a study (independent, intervening, dependent, control), drawing a visual model to identify this sequence, and locating and specifying how the variables will be measured or observed. Finally, the intent of using the variables quantitatively will be either to relate variables or to compare samples or groups in terms of an outcome.

This helps a researcher to design the quantitative purpose statement. The major components of a good quantitative purposes statement include a brief paragraph that contains the following:

(1) Words to signal the major intent of the study, such as "purpose," "intent," or "objective." Start with "The purpose (or objective or intent) of this study is (was) (will be) …"

(2) Identification of the theory, model, or conceptual framework to test in the proposal or study.

(3) Identification of the independent and dependent variables, as well as any mediating or control variables used in the study.

(4) Words that connect the independent and dependent variables to indicate that they are being related. Use "the relationship between" two or more variables or a "comparison of "two or more groups. Most quantitative studies fall into one of these two options for connecting variables in the purpose statement. A combination of comparing and relating might also exist, for example, a two-factor experiment in which the researcher has two or more treatment groups as well as a continuous variable as an independent variable in the study. Although one typically finds studies about comparing two or more groups in experiments, it is also possible to compare groups in a survey study.

(5) A position or ordering of the variables from left to right in the purpose statement, beginning with the independent variable, followed by the dependent variable. Place intervening variables between the independent and dependent variables.

Researchers also place the control variables between the independent and dependent variables. Alternatively, control variables might be placed immediately following the dependent variable, in a phrase such as "controlling for…" In experiments, the independent variables will always be the "manipulated" variable.

(6) Mention the specific type of strategy of inquiry used in the study. By incorporating this information, the researcher will anticipate the method discussion and enable a reader to associate the relationship of variables to the inquiry approach.

(7) Reference to the participants (or the unit of analysis) in the study and mention of the research site for the study.

(8) A general definition of each key variable in the study preferably using established definitions. In quantitative research, investigators use set and accepted definitions for variables. The definitions included here are intended to provide a general definition of variables to help the reader best understand the purpose statement.

Based on these points, a quantitative purpose statement "script" can include these ideas:

> *The purpose of this _____ (experiment? survey?) study is (was? will be?) to test the theory of _____ that _____ (compares? relates?) the _____ (independent variable) to _____ (dependent variable), controlling for _____ (control variables) for _____ (participants) at _____ (the research site). The independent variable(s) _____ will be generally defined as _____ (provide general definition). The dependent variable(s) will be generally defined as _____ (provide a general definition), and the control and intervening variable(s) _____ (identify the control and intervening variables) will be statistically controlled in the study.*

A Mixed Methods Purpose Statement

A mixed methods proposal or study needs to convey both quantitative and qualitative purpose statements. These statements need to be identified early in the study in an introduction, and they provide a major sign-post for the reader to understand the quantitative and qualitative parts of a study. Several guidelines might direct the organization and presentation of the mixed methods purpose statement:

1. Begin with signaling words, such as "The purpose of" or "The intent of."
2. Indicate of the type of the mixed method design, such as sequential, concurrent, or transformational.
3. Discuss a rationale for combining both quantitative and qualitative data in the proposed study. This rationale could be: (a) to better understand a research problem

by converging (or triangulation) both broad numeric trends from quantitative research and the detail of qualitative research; (b) to explore participant views with the intent of using these views to develop and test an instrument with a sample from a population; (c) to obtain statistical, quantitative results from a sample and then follow up with a few individuals to probe or explore those results in more depths; (d) to best convey the needs of a marginalized group or individuals.

4. Include the characteristics of a good qualitative purpose statement, such as focusing on a single phenomenon, using action words and non-directional language, mentioning the strategy of inquiry, and identifying the participants and the research site.
5. Include the characteristics of a good quantitative purpose statement, such as identifying a theory and the variables, relating variables or comparing groups in terms of variables, placing these variables in order from independent to dependent, mentioning the strategy of inquiry, and specifying the participants and research site for the research.
6. Consider adding information about the specific types of both qualitative and quantitative data collections.

Based on these elements, three mixed methods purpose statement "scripts" are as follows. The first two are sequential studies, and the third is a concurrent study.

> *The purpose of this two-phase, sequential mixed methods study will be to explore participant views with the intent of using this information to develop and test an instrument with a sample from a population. The first phase will be a qualitative exploration of a _____ (central phenomenon) by collecting _____ (data) from _____ (participant) at _____ (research site). Themes from this qualitative data will then be developed into an instrument so that _____ (theory, research questions, or hypotheses) can be tested that _____ (relate, compare) _____ (independent variable) with _____ (dependent variable) for _____ (sample of population) at _____ (research site).*

> *The purpose of this two-phase, sequential mixed methods study will be to obtain statistical, quantitative results from a sample and then follow up with a few individuals to probe or explore those results in more depth. In the first phase, quantitative research questions or hypotheses will address the _____ relationship or comparison of _____ (independent) and _____ (dependent) variables with _____*

(participants) at _____ (the research site). In the second phase, qualitative interview or observations will be used to probe significant _____ (quantitative results) by exploring aspects of the _____ (central phenomenon) with _____ (a few participant) at _____ (research site).

The purpose of this concurrent mixed methods study is to better understand a research problem by converging both quantitative (broad number trends) and qualitative (detailed views) data. In the study, _____ (quantitative instruments) will be used to measure the relationship between _____ (independent variable) and _____ (dependent variable). At the same time, the _____ (central phenomenon) will be explored using _____ (qualitative interviews or observations) with _____ (participants) at _____ (the research site).

CONCLUSION

It is important to distinguish in any researcher's mind that the purpose statement is what type of research a researcher is doing to fit or address the problem including method of study, variables, specific population, and setting. As a researcher is contemplating what to include in his purpose statement and then when he is writing it, the purpose statement is a concise paragraph that describes the intent of the study, and it should flow directly from the problem statement. It should specifically address the reason for conducting the study, and reflect the research questions. Further, it should identify the research method as qualitative, quantitative, or mixed. Then provide a brief overview of how the study will be conducted, with what instruments/data collection methods, and with whom (subjects) and where (as applicable). Finally, he should identify variables/constructs and/or phenomenon/concept/idea.

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