Research Design and Methodology I

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Answer the following questions in an essay format, with 1-2 fully developed paragraphs for each question. Include citations/references from your Developmental Reading log.

1. Review the OGS PhD/DPhil Prospectus Tutorial. You will develop your prospectus in a later course.

2. Research design depends on the problem and purpose statement alignment,

research questions, hypotheses, sampling, instrumentation, and data analysis. Why is

the alignment of these elements so important in quality research?

3. A problem statement should guide the design and alignment of a research topic. For

example, The problem is [state the problem concisely] among [name your participants

clearly] in a [state the scope/delimitation/boundary of your study]. The problem must

actually state a problem and how it affects the target population. Compose a problem

statement relevant to your prospective dissertation topic.

4. A purpose statement should clearly align with the problem statement and research

questions. Use the verb "explore" for qualitative designs and "examine" for quantitative

designs. Be sure to use this formulation: The purpose of this [methodology] [design]

study is to [explore/examine] [the problem] among [participants] in [location/context].

Compose a purpose statement relevant to your prospective dissertation topic.

5. Research questions should be written so as not to have a "Yes" or "No" answer. Use

words like "How" and "What" to be sure they are sufficiently broad. For example,

What/How do [participants] [perceive/express] [construct] regarding [the [problem] in

[location/context]? Compose at least two properly formatted Research Questions.

6. Based on your problem and purpose statements and proposed research questions,

which methodology and design would be most appropriate for your dissertation? Why?

Justify your design with citations from credible sources such as Creswell.

# Question 1

I have reviewed the prospectus tutorial.

# Question 2

Research design alignment is essential to quality research. Research is purposeful. It is seeking explanations for “…events, phenomenon, relationships and causes.” (Rukwaru, 2015, p.134) It seeks to understand what happened, and how and why the observations unfolded the way they did. To achieve this research employs a carefully “planned and managed” process to make information gathering and interpretation credible. (pp. 134-135) Thus the research design functions as a blueprint that structures the entire research process. (p. 137) “…social research needs a design or structure before data collection or analysis can commence.” (p. 137) Such design enables the collection of evidence to answer specified questions unambiguously. (p. 137) “In other words, when designing research we need to ask: given this research question or theory, what type of evidence is needed to answer the question (or test the theory) in a convincing way.” (p. 137)

The elements of the research process (the problem and purpose statement alignment, research questions, hypotheses, sampling, instrumentation, and data analysis) are not just interconnected but flow in a logical order with the preceding step informing the shape or design of the proceeding step. The identification of the problem will shape whether a qualitative or quantitative approach is best to uncover the information needed to understand the problem or a possible intervention. The overall methodology then shapes all the following steps in the design process. (Grønmo, 2019, p. 126) Having expressed the problem in a problem statement explaining “what are you researching and why?” and then explaining in the purpose statement “what are you trying to accomplish” one is equipped to begin aligning the research design with the appropriate methodology, either quantitative. If we seek a better understanding of the problem focused on learning about reasons or motivations we may focus on qualitative research and our problem and purpose statements will reflect that we are seeking to better understand how people view the problem. If we are seeking generalization from a sample to the population or test an intervention regarding the problem this will direct us toward a quantitative approach which will be reflected in the purpose statement. The methodology employed will shape the instruments used to measure the variables and shape the research questions and hypotheses that derive from them. (Reichard, 2023)

Looking at the specific elements in detail one can understand why alignment is fundamental to quality and effective research. A clear concise problem statement is the beginning of the research design. It lays out for the reader and the researcher what exactly is the heart of the matter. (Terrell, 2012, p. 13) The purpose statement flows from this problem statement with the researcher explaining the intent of the specific research study. The remaining steps of the research design flow from it. (Creswell and Creswell, 2022, p. 123) The problem and purpose statements shape the research questions laying the foundation of what exactly the research will explore and how the research project will be structured. The research questions narrow the focus while remaining focused on the initial problem in conjunction with the purpose of the study. (Grønmo, p. 124) The hypotheses derive from the research question with the formulation of a null and alternative hypothesis for specific testing that informs the research questions which trace back to the problem being addressed and the purpose of the study. (Reichard, 15:10) The research questions and hypothesis must align with the research methodology for if our hypotheses require testing with statistical analysis this requires quantitative methods whereas if research questions are being answered through inductive methods and thematic analysis, qualitative methods must be used. (Reichard, 6:30) These steps go hand in hand with determining the best research design to address problem with the selectin of one of two quantitative designs: quasi-experimental or correlational or the utilization of a basic qualitative design as these are support by Omega Graduate School. (Reichard, 1:39) This in turn defines the type of data we need to collect which will impact sampling as different sample approaches better support the methodologies. For instance, if I were to seek to understand how a particular group understands a problem, the subjects of the study would focus on the group selected because of specific connection to the research question rather than randomness. For quantitative approaches, larger samples are usually recommended, and randomness is important especially if seeking to applying interpretations based on a sample to a larger population. (Frost 2020, pp. 144-145, 161; Grønmo, p. 124) All these factors will then inform which instrumentation is utilized. For instance, social surveys or experiments are often used in quantitative research whereas interviews and case studies are often utilized in qualitative research. (Rukwaru, p. 139) Data analysis is then shaped by all these preceding steps with quantitative approaches requiring deductive reasoning informed by statistical analysis using descriptive statistics to describe the dataset and inferential statistics to draw conclusions and even make predictions about a population based on a sample. Qualitative approaches may utilize descriptive statistics to describe the data gathered from the participants, but uses inductive methods based on organizing and interpreting data and understanding the participants in the study. (Grønmo, p. 122-125). The interpretive method will reflect if data was examined in detail with a quantitative approach or explored in a broader way for new information as in qualitative research. (Reichard, 16:55)

# Question 3

For purposes of this exercise, the following will be utilized to complete the remaining assigned tasks in this assignment. In a previous assignment regarding a hypothetical research project, the focus was on young adults from Gen Z who have failed to launch, that is are not seeking employment, educational or social opportunities outside the home. The previous assignment employed an extensive literature review to better understand this phenomenon and proposed using an educational based intervention within the congregations of the Lutheran Church – Missouri Synod to empower parents to improve outcomes for their FTL children.

Terrell reminds us that the key thing in constructing a problem statement is to focus on a concise statement that enables the reader to understand the problem precisely. (p. 13) He lists six keys to a good problem statement: it is interesting to the researcher, examination of the problem is manageable by the researcher, it can be researched through the collection of data, it has a practical significance, it is ethical to investigate, and the research has the time and expertise to investigate the problem. (pp. 9-12)

Problem Statement: The problem is the increasing prevalence of Failure to Launch Syndrome among Generation Z children in LCMS congregations in Texas, which impedes their ability to achieve independence and negatively impacts their personal and spiritual development.

# Question 4

“The purpose statement establishes the intent or objective of the research study.” (Creswell and Creswell, p. 123) This statement specifies the specific study being applied to the problem. (p. 124) “The purpose builds on a need (the problem) and is refined into specific questions (the research questions).” (p. 124) Creswell and Creswell recommend to specific formulas for qualitative and quantitative approaches. “Quantitative purpose statements differ considerably from the qualitative statements in terms of the language and a focus on relating or comparing variables or constructs. Constructs is a term used for a more abstract, general meaning of a variable.” (p. 130) For a qualitative approach the following: “The purpose (or study aim) of this\_(qualitative study or more specifically a qualitative approach, such as ethnography, case study, or other type) study is (was? will be?) to\_ (understand? explore? develop? generate? discover?) the (central explore? develop? generate? discover?) the \_ (central individuals, groups, or organizations) at\_\_ (research site). At stage in the research, the (central phenomenon being, studied) will be generally defined as\_\_ (provide a general studied) will be generally defined as\_\_ (provide a general definition).” (p. 127) For a quantitative approach the following: “The purpose of this (experiment? survey?) study is (was? LI will be?) to test the of that Survey?) study is (was? predicts) that the. *(independent variable) (compares? relates?) to.* (dependent variable). This study aims to recruit (participants) at (the research site). The independent variable(s) \_\_will \_ (provide a definition). The dependent variable(s) will be defined as\_\_ (provide a definition).” (p. 131)

Purpose Statement: The purpose of this quantitative correlational study is to examine the impact of educational-based interventions with parents on the phenomenon of Failure to Launch Syndrome among Generation Z children who are not seeking employment, educational, or social opportunities outside the home in LCMS congregations in Texas.

# Question 5

Research questions are specific questions that are examined and answered in the study. Research questions may lead to hypotheses out the expected outcomes of the research project. (Grønmo, p. 72) This is normal for quantitative data and methods using deductive research focusing on whether a hypothesis is supported or rejected. Qualitative studies usually do not have research questions further elaborated into testable hypotheses as they are focusing on exploring a topic in more general and open-ended ways. (p. 73) Research questions serve as guidelines for “designing and conducting the new study”. (p. 75) These questions delimit and specify “…those phenomena and conditions in society which are included in the study.” (p.75) They serve as the basis for selecting appropriate “…approaches, data, analysis and interpretations.” (p. 75)

Research Questions:

1. To what extent do parents of Generation Z children in LCMS congregations in Texas perceive their guidance as ineffective in supporting their young adults' transition into independent adult life?

2. What impact does the provided parental training have on enhancing parental mentoring of Generation Z children in LCMS congregations in Texas, particularly in improving their children’s engagement with employment, education, and social opportunities outside the home among those previously exhibiting Failure to Launch Syndrome?

# Question 6

The most appropriate methodology for this study is quantitative quasi-experimental research. This design is justified due to the need to examine the relationships between specific variables, particularly the impact of parental training on the outcomes of Generation Z children exhibiting Failure to Launch Syndrome. Quantitative research is the approach used to test the relationship between variables or as in this case to examine the impact of an intervention. (Creswell and Creswell, p. 5, 21) Since the purpose is to test the effectiveness of a specific intervention, in this case specific education of parents of FTL children for increased effectiveness in their mentoring leading to observable improvement in seeking of employment, education and or social engagements outside the home, a quasi-experimental design is most appropriate.

A quasi-experimental design is appropriate here because the study involves working with a naturally occurring group (parents and children in LCMS congregations within the LCMS) examining the effect of an intervention. Thus, random assignment or the use of a control group is not a factor in this study. (Frost, pp. 196-198; Creswell and Creswell p. 48, 225) A quasi-experimental research is well-suited for studies conducted in real-world settings, such as church congregations. The interventions take place in the natural environment of the participants, making the findings more generalizable to similar LCMS communities.Thus, findings should be applicable to parents and children in congregational settings like but outside the specific congregations in the study. (Frost, pp. 197-198)

In addition, even though there is no random assignment, quasi-experimental designs allow for controlling of some confounding variables through statistical techniques, for example family size, educational level of the parents, or income. (Frost, p. 103) While beyond the scope of this class and this question, Creswell and Creswell suggest a range of techniques to help with the validity of the study including the use of statistical techniques such as ANOVA for parametric data to explore variables that are mixed between-within groups. It appears for nonparametric data there is not a statistical technique that can help control for confounding variables. (Which I am sure we shall learn about more in the future). (pp. 180-184; Rockinson-Szapkiw, 2013, 23:59) However the researcher must be aware that with quasi-experimental designs confounding variables if not accounted for can bias the results. In this study we may need to account for educational level as parents with better education might receive the intervention more effectively. Or the economic status of the family might impact the ability of children to seek employment outside the home (for instance being able to provide a vehicle for transportation). Given we are looking at congregations, the size, resources, and attention provided to parents may also have an impact during the time of the intervention.

For this particular study a quantitative quasi-experimental design is most appropriate because random assignment is not feasible as the focus is on a particular group of people in their natural settings, it does allow for a pre- and post-intervention comparison, and is well suited for making real-world applications within similar church communities while allowing for some potential for statistical controls to be applied to account for confounding variables.

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