Research Design and Methodology II

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Assignment #3 – Essay

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. Based on the Research Questions you developed in Core 3, and a real or hypothetical

validated survey instrument, compose hypotheses for a quantitative study. Hypotheses

should be formatted as follows: 'H01: No statistically significant difference exists in

[dependent variable] between [group 1] and [group 2] among [participants]' for quasi-

experimental and causal-comparative designs, or 'H01: No statistically significant

relationship exists between [variable] and [variable] among [participants]' for correlational

designs. Formatting hypotheses correctly is important to establish a strong research

design.

3. Why is a null hypothesis necessary? Why is a null hypothesis rejected rather than the

alternative hypothesis accepted? What does the null hypothesis say about the

“prevailing knowledge” about the problem?

4. What are the criteria for rejecting a null hypothesis? How does the alpha level (typically .05) relate to the p-value (probability) when deciding whether or not you can reject your null hypothesis based on statistical tests?

5. How should your Literature Review (Chapter 2) inform your research design and

methodology in Chapter 3? What is the connection between theoretical/conceptual

frameworks from the literature and research questions, instrumentation, variables, and

hypotheses?

6. How does thematic analysis in qualitative research help answer research questions?

How are themes abstracted from transcripts or written responses from participants in

basic qualitative designs?

Include a title page, well-developed introduction and conclusion paragraphs, a references page,

and in-text APA-formatted citations to support your responses.

# Part One: Review the Prospectus Tutorial

I have reviewed the tutorial.

# Part Two: Construct Hypotheses

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? Hypotheses are built off a potential correlative design for this question.

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? Hypotheses are built off a potential quasi-experimental design measuring these aspects within the same group.

Hypotheses:

H01 No statistically significant relationship exists between parents' perception of their guidance effectiveness and young adults' transition to independent adult life among parents of Generation Z children in LCMS congregations in Texas.

H11 A statistically significant relationship exists between parents' perception of their guidance effectiveness and young adults' transition to independent adult life among parents of Generation Z children in LCMS congregations in Texas.

H02 No statistically significant difference exists in in the effectiveness of parental guidance between parents who received the provided training and those who did not among parents of Generation Z children in LCMS congregations in Texas.

H12 A statistically significant difference exists in the effectiveness of parental guidance between parents who received the provided training and those who did not among parents of Generation Z children in LCMS congregations in Texas.

H03 No statistically significant difference exists in young adults’ engagement with employment, education, and social opportunities outside the home between children of parents who received the provided training and those who did not among Generation Z individuals previously exhibiting Failure to Launch Syndrome in LCMS congregations in Texas.

H13 A statistically significant difference exists in young adults’ engagement with employment, education, and social opportunities outside the home between children of parents who received the provided training and those who did not among Generation Z individuals previously exhibiting Failure to Launch Syndrome in LCMS congregations in Texas.

# Part Three: Null Hypothesis

In research we usually deal with samples and hypothesis testing that relies on probability rather than absolute evidence as collecting all relevant information from an entire population would most likely not be possible. The null hypothesis begins with the idea that no relationship or difference exists between the variables being observed or tested. This is assumed to be true until there is enough evidence backed by statistical examination to reject it. Thus, two mutually exclusive hypotheses are constructed to explore the relationship between the variables. Either there is a relationship or an effect or there is not. (Frey, 2022, p. 1100) (Willard, 2020, p. 116) The research design focuses on attempting to prove that the null hypothesis is true with “…the hope it can be rejected thereby giving indirect support to the alternative hypothesis.” (Willard, p. 117) It is important for the researcher (when supported by statistical evidence) to either reject the null hypothesis or fail to reject it. The null hypothesis is rejected rather than the alternative accepted because the focus is on the null hypothesis. This reflects that statistical tools utilized in hypothesis testing can only demonstrate that a hypothesis is false rather than true. (p. 117) (Terrell, 2012, p. 28) Researchers "fail to reject" rather than "accept" the null hypothesis because hypothesis testing does not prove the null is true—only that there is insufficient evidence to reject it. Since the alternative hypothesis is often imprecise, small differences may exist but go undetected, making it impossible to distinguish a true null from a minor effect. (Frey, 1100) If we fail to reject the null hypothesis, it is important for the researcher to avoid drawing the conclusion or suggesting in his research summation that the null hypothesis is true. (p. 1101)

# Part 4: Rejecting the Null Hypothesis

The null hypothesis will claim there is no difference or any difference between sample means is due to chance. (Willard, p. 116) Rejecting the null hypothesis depends on the variability of the means, as larger differences provide stronger evidence for rejection, while closely grouped means suggest no significant difference. If the means significantly differ, the null hypothesis can be rejected. (Frey, p. 1101) This approach will impact the wording of the hypotheses such as suggesting differences are due to chance, asserting no true difference exists between the sample and population, or stating that the treatment has no effect. In contrast, the alternative hypothesis is the opposite of the null and suggests that any observed differences are true, reflecting the effectiveness of the treatment or independent variable. (Willard, p. 116)

In research we are looking for differences that are real rather than differences that reflect sampling error. We are looking for a significant difference. (Terrell, p. 27) In quantitative studies testing the null hypothesis assesses how likely an observed result would be utilizing a p-value (probability value) of how likely one would observe a particular result. This statistical significance is usually set at 0.05 reflecting a confidence interval of 95%. This high bar helps to reduce false positives. (Graeme and Coppock, 2023, p. 99) (Frey, p. 1102) If the p-value is met the research can conclude there is a 5% or less probability that the observation was due to chance. (Willard, p. 118) As the observation between any two data sets is rarely if ever going to be exactly the same, the null hypothesis will attribute differences to chance with the p-value meeting the threshold of 0.05 supporting that observed changes are likely not because of chance thus leading to rejection of the null hypothesis. (Willard, p. 116)

# Part 5: Literature Review

Research design functions as a blueprint guiding the research process to ensure evidence collected and its interpretation answers the research questions as clearly as possible. (Rukwaru, 2015, p. 137) A key component of this design involves the literature review. The literature review functions as a study within the study which provides understanding not only what is previously known about the subject but how the subject has been previously investigated. (Grønmo, 2019, p. 93-94) The literature review becomes part of the conversation informing what the researcher needs to take into account for the subject at hand. The researcher is informed by and uses this review to justify what is included and excluded in the design. (Cheek and Oby, 2023, p. 5) The relevant literature includes not only the works directly related to the topic but also those that have implications for the study’s design, implementation and interpretation. Taking a position in research involves critically engaging with the literature—agreeing or disagreeing with various parts, selecting which aspects to incorporate, and justifying those choices by asking "and why?" The Researcher may find that the initial framing of a research problem develops after reviewing empirical studies. This could lead to a rethinking of the problem by exploring different theoretical concepts or additional empirical work, ultimately refining the research direction. (pp. 5-6) The review thus functions not just as a summary of what is known but how what is known suggests a way for the researcher to add to the conversation on the subject. (p. 7)

The connection between theoretical/conceptual frameworks and research elements like research questions, instrumentation, variables, and hypotheses is crucial in shaping the entire research process. A theoretical or conceptual framework provides the underlying structure for understanding the research problem and informs how the study is designed. This framework guides the development of research questions, which are aligned with the theoretical lens that frames the investigation. It also influences the selection of variables that need to be examined and the hypotheses that the study will test. The theoretical framework also impacts the choice of research methods and instruments. Methodology, as Crotty (1998) explains, refers to the strategy or plan behind the choice of methods, linking these methods to the outcomes the researcher seeks to achieve. When considering methodology, researchers must evaluate whether a particular method generates the type of data needed to answer their research questions effectively (Greener, 2011).

The theoretical framework of a research study is a system of concepts, assumptions, beliefs, and theories that guides the entire research process, from question formulation to data collection, analysis, and interpretation. This framework influences the conclusions drawn from the study. Theory, in research, provides a set of standardized propositions or concepts that can be tested to either support or disprove the theory. The goal is to generalize the findings from the data to specific population groups, often using mathematically derived principles and procedures for this generalization (Cheek and Oby, pp. 12-15).Thus, the theoretical framework shapes the design and methodology, ensuring that the methods used produce the necessary knowledge to address the research problem. (pp. 11-12) The theoretical frameworks learned from the literature review will shape what learning is needed to address the researcher’s problem helping to develop research questions, what type of data to collect, what data collection methods and instruments should be employed, and how the overall design will contribute to the ongoing conversation about the subject. (p. 8) This organic connection of the existing study with work that has come before adds validity to the current research design and validity of its conclusions.

# Part 6: Thematic Analysis in Qualitative Research

Interpreting qualitative data is more of a “strategy” or “art” than a specific procedure. (Cheek and Oby, p. 151) Interpreting qualitative data requires being “immersed” in the data in a conversation that is constantly refining the researcher’s understanding and interpretation. (p. 152) For instance, when using qualitative interviews to gather data, you continuously compare the findings from one interview with those from other interviews. This ongoing process allows you to refine your initial interpretations and hypotheses, examining how they relate to your research questions. Additionally, you compare these interpretations with existing theoretical and empirical work in the field to see how your findings align or contrast with what others have discovered. (p. 152) As a result of this ongoing, reflective process, the researcher’s understanding deepens, allowing the development of models or diagrams that illustrate the relationships within the data. The researcher can also connect these findings to existing literature and explore connections between concepts or categories. This type of analytical work is a key element of the "art of interpretation." (p. 153)

This is not to suggest that the interpretive process is arbitrary and without a logical framework that can help demonstrate the reliability of qualitative conclusions. The interpretive strategy will employ a means of coding, relating similar insights with one another building toward larger themes. Coding involves identifying, labeling, and organizing data to represent a specific phenomenon. This process includes selecting a segment of data, such as a word or phrase from an interview transcript and assigning it a label or code that reflects its meaning. Coding requires analytic skills like classifying, prioritizing, and conceptualizing. As you code, you ask yourself questions such as whether certain segments of text relate to a specific inquiry, share common understandings, or represent different examples of the same idea. This helps you group similar codes into categories. (p. 162)

The development of categories is an iterative process, evolving as more data is collected and new codes emerge. You must continuously refine categories by comparing them to each other and adjusting them as new codes are added. Categories should not merely be a collection of codes but also reflect the underlying ideas behind those codes. This approach ensures that category development moves beyond simple organization and leads to meaningful themes that capture the essence of the data. (p. 162)

Related to my hypothetical study of GenZ young adults who fail to launch, rather than seeking to test an educational intervention informed by insights of other researchers on the subject, I might wish to examine the parents of said young adults for myself within the confines of the Texas District of the Lutheran Church – Missouri Synod. My initial data collection could be conducting interviews with parents identified as having GenZ young adults and keeping a transcript of the responses looking for subjects the parents bring up, their emotional responses, and the intensity of the parent’s struggles with young adult children who have failed to launch. After using a standard interview process I would return to the transcripts and look for similar phrases or other packets of meaning that would indicate a similar aspect such as “my child doesn’t want to get a job.” I could code this as lack of motivation. Another common report might include that the parents feel they have the burden of financial support for their child. This could be coded financial dependency. I would anticipate I might hear expressions that would be coded as no ambition, no career goals, to busy playing video games, does not like to leave the house, relies on parents and so forth. These might be assembled into larger themes such as anxiety, demotivation, and dependency.

Further interviews or qualitative data collection might help to elaborate on the roles that anxiety about external forces and social media impact these Genz young adults’ behavior. Based on my previous literature review on the subject I suspect the ultimate themes would look like personal challenges (including lack of motivation, anxiety, lack of clear goals), reinforcing parental roles (financial co-dependency, overprotection, emotional fusion) and external pressures (social media, economic and political instabilities, peer pressure).

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