Research Methods in Applied Settings An Integrated Approach to Design and Analysis 3rd edition Gliner Solutions Manual

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CHAPTER 2

PLANNING A QUANTITATIVE RESEARCH PROJECT

Chapter Outline

- Overview of the Steps in the Research Plan
- Research Problems
  - Sample Research Problems
  - Sources of Research Problems
    - Identifying Research Problems in the Literature
    - Characteristics of a Good Research Problem
    - Broad Versus Narrow
    - Widespread Versus Limited Interest
    - Well-Researched Versus Unknown Territory
    - Frameworks for Stating Research Problems
      - Format
      - Examples of How to Phrase a Research Problem.
- Review of the Literature
  - Definition of the Literature Review
    - Steps in the Literature Review Process and Ethics in Writing
    - Sources to Use in Literature Reviews

Teaching Objectives

- The student will be able to identify the ordered steps in the research plan.
- The student will be able to define the concept of a research problem.
- The student will be able to identify and rate the research problems in extant literature.
- The student will be able to discuss the major sources of research problems.
- The student will be able to obtain examples of research problems from the literature.
- The student will be able to rate research problems by the following characteristics: filling a gap in the literature, testing a theory, stated clearly and unambiguously; being testable; being ethical, feasible, and being of interest to the researcher.
- The student will be able to discuss how research problems can be broad or narrow, widespread or limited in interest, and well researched or unknown territory.
- The student will be able to define *literature review*.
- The student will be able to identify sources to use in a literature review.

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Critical Thinking Exercises

- Working in groups, have students use the steps of the research plan to plan a research project. Have the members of the group select a topic to research. For each step, have the students identify how the steps would be completed for their research project.

- As one of the major assignments for the course, have each student develop a research project using the steps in the research plan. As each step is discussed in class, the students can present the step as it fits in their project. At the end of the semester, the students will have a complete research project completed.

- Have each student locate an empirical study and identify the steps of the research plan throughout the article.

- Working in groups, have students write a research problem. Have the groups exchange their answers and critique each others' research problems using the characteristics of a good research problem (e.g., filling a gap in the literature; testing a theory, stated clearly and unambiguously; being testable; being ethical, feasible, and being of interest to the researcher).

- Have students locate peer reviewed articles in their discipline and discuss the literature review included in the study. Does it seem complete? Are there aspects of the topic that should be included in the literature review that are not?

Objective Problems

1. What asks: "What relation exists between two or more variables?"
   a) Attribute IV
   b) Hypothesis
   c) Research problem*
   d) Active independent variable
   e) Dependent variable

2. Major sources for research problems include:
   a) Theory
   b) Personal experience
   c) Clinical observation
   d) All of the above*

3. Characteristics of a good research problem include:
   a) Empirical and/or theoretical support
   b) A clear and unambiguous relationship among variables
   c) Several potential research questions that are testable
   d) All of the above*

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4. What is the first step of the research process?
   a) Create a plan for research
   b) Select the research approach
   c) Identifying the research problem*
   d) Obtain Human Subjects Approval

5. When should a research question be modified?
   a) At any time during the study
   b) When the hypothesis is confirmed*
   c) Any time prior to collecting data
   d) Never—research questions cannot be changed in quantitative research

6. The common sources of research problems include:
   a) Clinical observation
   b) Theory
   c) Personal experience
   d) Existing research literature
   e) All of the above*

7. Research reviews:
   a) Identify gaps in the literature
   b) Help select appropriate methods for the topic
   c) Describe the inferences that have come from past research
   d) All of the above*

True or False

1. Good research should have a conceptual as well as practical base. (T)
2. With the positivist approach, a literature review is conducted before the research study can result in premature conclusions and biases. (F)
3. Research problems should be feasible, given the researcher's abilities and resources. (T)
4. Quantitative researchers tend to place emphasis on filling gaps in the literature. (T)
5. A research problem is the same as a personal problem or societal problem. (F)
6. Theory is important in the research process. (T)
7. Research literature reviews are without bias. (F)
8. Research literature reviews are always long. (F)

Interpretation Questions

1. What are the ten steps in the research process?

   Answer: The ten steps in the research process are (1) identify a research problem, (2) conduct a research literature review, (3) write research questions or hypotheses, (4) select the research approach and specific design, (5) create a plan for conducting the research, (6) obtain approval from the human subjects IRB, (7) collect the data, (8) analyze the data, (9) interpret the data, and (10) communicate the findings.

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2. What are the characteristics of a good research problem?

   Answer: A good research problem should be grounded in the empirical (databased) and theoretical literature, examine relationships between two or more variables, fill a gap in the literature or provide a test of a theory; be stated clearly and unambiguously; be testable; be ethical, be feasible, and be of vital interest to you**.**

3. List the types of sources that are useful for a literature review.

   Answer: Answers may vary.
   1. Peer-reviewed journal articles
      Advantage: Most trustworthy source information because it has been reviewed by peers in discipline.
      Disadvantage: It may be difficult to obtain the article if the original journal is out of print or in a foreign language.
   2. Open-access journal articles
      Advantage: Easy to access the article because it is free and on the Internet.
      Disadvantage: It is necessary to check if the article has been reviewed by peers.
   3. Unpublished works such as dissertations and presentations
      Advantage: Even though these sources are unpublished, these sources allow researchers to know what research is currently being performed and increase their understanding of the topic.
      Disadvantage: Since the research is not published in a peer-reviewed journal the researcher will need to carefully evaluate the quality of the methodology and results.

4. Why should the researcher be cautious about utilizing web sources in the literature review?

   Answer: The most trustworthy information usually can be found in refereed journal articles. Internet sources may not be peer reviewed and may be incorrect.

Application Problems

1. What is the purpose of the literature review in a research study?

Answer: The purpose of the literature review is to identify gaps in the literature, assist in selecting appropriate methods for the present study, and to describe inferences from past research.

2. Why is it important to use primary sources rather than secondary sources in the literature review?

Answer: Secondary sources may have misquoted or misinterpreted the primary source.

3. List three sources for the literature review—what are the advantages and disadvantages of each?

Answer: Refereed journal articles—Advantages include that this is probably the most trustworthy information available because it has been reviewed by peers in the field. A

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disadvantage to refereed journal articles is that commonly there can be many articles available, so deciding how to narrow down your search can be difficult. Internet websites—Advantages include easily accessible information. A disadvantage is that some websites can include suspect information. Dissertations and conference presentations—Advantages include that helping to identify topics that are currently being studied and methods that are being utilized. Disadvantages include that dissertations and conference presentations have not always undergone the extensive review as that of published material.

4. Why should the researcher be cautious about using Web sources in the literature review?

Answer: It is difficult to know if the website includes suspect information.

5. Why is it important to link theory to the research problem?

Answer: Theory explains natural phenomena, which is the goal of science. Thus, the value of the results of a study is based on the theory that was utilize in designing and conducting the study.

6. In this chapter, the authors each describe the process they went through to identify a research problem. For one of these three research problems, answer each of the following:

Answer: For N. L. L.

a) Is this a broad or narrow research problem? Explain.

The research problem of finding out the level of willingness to seek counseling for counselors in training is a narrow research problem. It is narrow because it is focused only on willingness to seek counseling for a limited sample, that of counselors in training.

b) Is this research problem of widespread or limited interest? Explain.

The research problem is of relatively limited interest because, most likely, only those who train counselors and counselors in training would be interested in the results.

c) What topics in the literature might the researcher want to explore? Explain.

Possible topics to explore would include variables that have been researched in relation to willingness to seek counseling.

d) Rate the stated research problem on the different characteristics of a good research problem—support your answer.

The research problem appears to fill a gap in the literature because N. L. L. states that there was very little research that had already been conducted in this area. Furthermore, the research problem is based on the theory of Cramer's model. The research problem is stated clearly, which is good. The research problem is testable by empirical methods, it is an ethical problem to study, and appears to be feasible for the researcher. Finally, it

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sounds as though the research problem was of interest to N. L. L. Overall, the research problem presented by N. L. L. appears to be good.

Answer: For J. A. G.

a) Is this a broad or narrow research problem? Explain.

The research problem of finding out how are heart rate and metabolic requirements related under conditions of anxiety is a somewhat narrow research problem. It is somewhat narrow because it is focused on heart rate and metabolic requirements related under conditions of anxiety, but does not specify the sample or what conditions of anxiety.

b) Is this research problem of widespread or limited interest? Explain.

The research problem is of widespread interest because many people would be interested in understanding the possible relationships between heart rate and metabolic requirements related under conditions of anxiety.

c) What topics in the literature might the researcher want to explore? Explain.

Possible topics that the researcher would want to explore different types of conditions that create anxiety, heart rate in relation to anxiety, and metabolic rate in relation to anxiety.

d) Rate the stated research problem on the different characteristics of a good research problem—support your answer.

The research problem appears to fill a gap in the literature because J. A. G. states that the previous literature did not examine metabolic requirements under conditions of anxiety where heart rate is increased. The research problem is stated clearly, which is good. The research problem is testable by empirical methods, it is an ethical problem to study, and appears to be feasible for the researcher. Finally, due to the experience of J. A. G., it sounds as though the research problem was of interest. Overall, the research problem presented by J. A. G. appears to be good.

Answer: For G. A. M.

a) Is this a broad or narrow research problem? Explain.

This research problem appears to be very narrow due to the focus being only on babies who were born prematurely, are preverbal, are abused or neglected, and their mastery motivation.

b) Is this research problem of widespread or limited interest? Explain.

The research problem is of limited interest because only those babies who were born prematurely, are preverbal, and are abused or neglected would benefit from the results of

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the study. It would have more widespread interest if babies from many different backgrounds (i.e., full term, not abused) were included the study.

c) What topics in the literature might the researcher want to explore? Explain.

Possible topics that the researcher would want to explore mastery motivation, abilities of babies who are born prematurely, abilities of babies who are preverbal, and abilities of babies who are abused and neglected.

d) Rate the stated research problem on the different characteristics of a good research problem—support your answer.

It is unknown if the research problem fills a gap in the literature. G. A. M. does not state whether previous literature was examined while developing the research problem. The research problem is stated clearly, which is good. The research problem is testable by empirical methods, and it is an ethical problem to study. The research problem may present problems for the research due to the feasibility of the study: the researcher would need to find preverbal, premature, abused babies whose parent(s) consented to be included in the study. Finally, due to the experience of G. A. M. it sounds as though the research problem was of interest. Overall, the research problem presented by G. A. M. appears to be fair.

7. For one of the five sample studies described in Chapter 1, answer each of the following:

Answer: Study 1: Carnes-Holt & Bratton (2014)

a) Is this a broad or narrow research problem? Explain.

The research problem in Carnes-Holt & Bratton (2014) is to investigate the use of Child Parent Relationship Therapy with adoptive families. This research problem appears to be narrow, as it addresses the use of a specific intervention with adoptive children. However, the children present with a large range of issues and the age of the children is not specified, which broaden the problem slightly.

b) Is this research problem of widespread or limited interest? Explain.

The research problem is of limited interest as the primary group interested would be child psychologist; however, the information gained may be transferable to other populations.

c) What topics in the literature might the researcher want to explore? Explain.

Literature that the researcher many want to explore include prior uses of the measurement tools (CBCL and MEACI), counseling methods common in child psychology, counseling methods used with adoptive children, counseling needs of adoptive children, and other factors that may influence the impact of the intervention.

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d) Rate the stated research problem on the different characteristics of a good research problem—support your answer.

It appears that this research problem fills a gap in the literature. The research problem was clearly stated. The research problem is testable by empirical methods, and it is an ethical problem to study. The research problem most likely will not present problems for the research. It appears that the research problem was of interest to the researchers. Overall, the research problem presented appears to be good.

Answer: Study 2: Arthur & Hardy (2014)

a) Is this a broad or narrow research problem? Explain.

The research problem, evaluated the effectiveness of a transformational leadership intervention Arthur & Hardy (2014) appears to be somewhat narrow as it evaluates the effectiveness of one specific intervention. The lacking specificity of the target population and the intervention content make the problem a bit less narrow.

b) Is this research problem of widespread or limited interest? Explain.

The research problem seems to be of widespread interest because many would be interested in the effectiveness of different leadership interventions.

c) What topics in the literature might the researcher want to explore? Explain.

The researcher would want to investigate literature regarding different leadership styles, and the four components of the intervention (transformational leadership; vision, support, and challenge; motivation; and coaching skills) and why they are to be included in the intervention.

d) Rate the stated research problem on the different characteristics of a good research problem—support your answer.

It is unclear if the research problem fills a gap in the literature as the information provided does not detail any related literature. The research problem was clearly stated. The research problem is testable by empirical methods, and it is an ethical problem to study. The independent variable is clearly defined; however, there is some ambiguity of the dependent variables (Ex: How are leadership behaviors identified, defined, and recorded?). The research problem most likely will not present problems for the research. It seems this research topic could be of great interest for those interested in effective leadership styles. Overall, the research problem presented is good.

Answer: Study 3: (Economics, 2014)

a) Is this a broad or narrow research problem? Explain.

The research problem, compared graduate business students with education students in regard to their perceptions of professor pedagogical content knowledge, individualized

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consideration, student-professor engagement in learning, professor intellectual stimulation, and student deep learning (Economics, 2014) is a narrow research problem. This assessment specifically compares two groups of graduate students regarding five specific outcomes.

b) Is this research problem of widespread or limited interest? Explain.

This research problem is of limited interest as the research seems only to be applicable to educators in he business and education fields.

c) What topics in the literature might the researcher want to explore? Explain.

The researcher would want to explore the topics of professor pedagogical content knowledge, individualized consideration, student-professor engagement in learning, professor intellectual stimulation, and student deep learning.

d) Rate the stated research problem on the different characteristics of a good research problem—support your answer.

There is no information provided regarding prior research. The research problem was clearly stated. The research problem is testable by empirical methods, and it is an ethical problem to study. The research problem will not present problems for the research. It is unclear whether the research problem was of interest to the researchers. Overall, the research problem presented appears to be good.

Answer: Study 4: (Tomko & Munley, 2013)

a) Is this a broad or narrow research problem? Explain.

This research problem examines "psychologists' attitudes and judgments towards older adults" and is very narrow. This is because it examines one specific topic in one specific discipline.

b) Is this research problem of widespread or limited interest? Explain.

The interest in this topic is likely to be limited to psychologists. However, other areas of mental health and education might find this of use.

c) What topics in the literature might the researcher want to explore? Explain.

The researchers may want to explore the topics of "attitudes" and "judgments" specifically to define those terms. They then may want to narrow the focus to examine studies that looked at attitudes and judgments of mental health professions towards their adult clients. Of course, they may want to explore the literature on all the attribute variables and their combinations as they relate to the outcome variables.

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d) Rate the stated research problem on the different characteristics of a good research problem—support your answer.

The information does not indicate whether this study fills a gap in the research. The research problem is easy to identify; however, the variables of "attitudes" and "judgments" are not well defined. This problem is tested using empirical methods. This topic is not only ethical, but may help improve ethics in the profession. However, it is not clear how participants were treated, so the ethics of the research process are not clear. One may assume that the researchers found the study interesting, since they conducted it. Overall, a clearer definition of the terms and more articulation about the background literature and ethics would make this better.

Answer: Study 5: (Oliverira, et al., 2014)

a) Is this a broad or narrow research problem? Explain.

This study examines student engagement with research in one specific institution. This is a very narrow research problem since it is concerned with a specific place and topic.

b) Is this research problem of widespread or limited interest? Explain.

The research question may be of widespread interest by other institutions that are interested in research engagement. However, since it used descriptive statistics, the usefulness of this study's results is moot; it makes no statistical inferences.

c) What topics in the literature might the researcher want to explore? Explain.

The researchers would want to explore topics such as perceptions of research, obstacles that deflect research interest, and best times to teach a research class. This could include multiple disciplines, but should narrow to medical students.

d) Rate the stated research problem on the different characteristics of a good research problem—support your answer.

Very little information was given regarding previous research; therefore, the extent to which this study fills a gap is unknown. However, this study may fill a gap for the institution at which it was conducted, and it may help other institutions conduct similar surveys. The research problem was not explicitly stated and was generated by drawing an inference from the information. This study seems ethical, though more background information is needed to make a definite conclusion. It seems that the research problem was of interest to the authors, but this comes from the assumption that they are involved in medical research education at the institution where it was conducted. Depending on the goals of the study, the research problem seems okay, though more direct clarification of that problem would improve the reader's ability to identify it, and more background literature would support the existence of any gaps the authors are trying to fill (or not to fill).

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Chapter 2

Planning a Quantitative Research Project

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Chapter 2 Outline

- Overview of the Steps in the Research Plan
- Research Problems
    - Three Sample Research Problems
    - Sources of Research Problems
        - Identifying Research Problems in the Literature
        - Characteristics of a Good Research Problem
        - Broad Versus Narrow
        - Widespread Versus Limited Interest
        - Well-Researched Versus Unknown Territory
        - Frameworks for Stating Research Problems
            - Format
            - Examples of how to Phrase a Research Problem.
- Review of the Literature
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    - Sources to Use in Literature Reviews

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Teaching Objectives for Chapter 2

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The student will be able to identify sources to use in a literature review.

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Figure 2.1

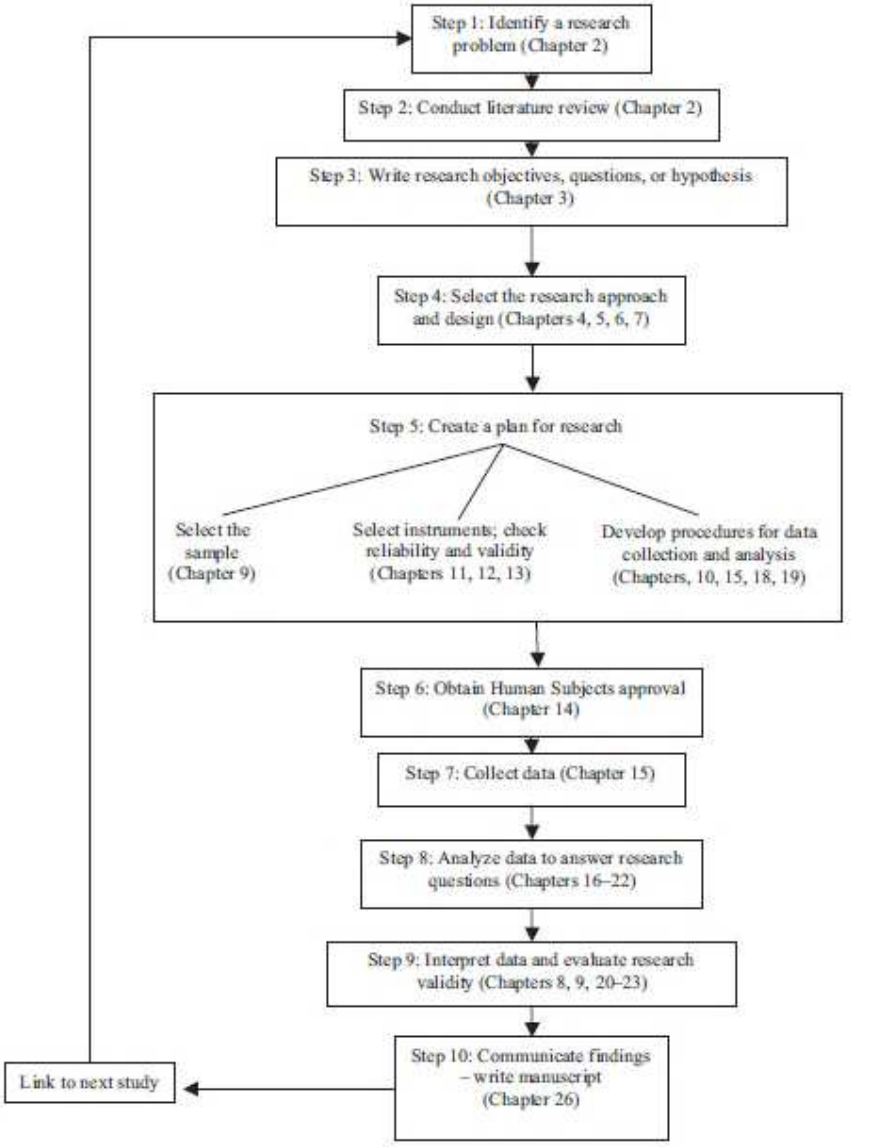


FIGURE 2.1
Steps in the Research Process for a Quantitative Study and the Chapters that Present Information on the Topic.

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Key Concepts

Characteristics of a good research problem
Literature review
Research problems
Sources of research problems
Framework for stating research problems
Process for conducting a literature review
Ethics in writing literature reviews
Sources for literature reviews
Steps in planning research
Theory

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Key Distinctions

Broad versus narrow research problems
Existing literature versus personal experience versus clinical observation
Literature review versus annotated bibliography
Primary source versus secondary source
Well-researched versus unknown territory
Widespread versus limited interest

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