

**Lecture Notes for Advanced Research Design  
by Doretha Brown-Simpson**

**Friday, February 9, 2007**

Address key points in the chapter. Summarize the chapters with your class mates.

Buy the following textbooks: Writing Empirical Research Reports, Completing Your Research or Dissertation

Use an existing survey. Do not reinvent the wheel. Create a few surveys based on the existing survey. You may need to validate the survey or, test the reliability of the survey.

Qualitative Data- Interviews, etc.

Quantitative Data- Numerical

Empirical Data

(Observable Data-Measurable)

Jericho vs. Uniondale-ELA Results

Non-Empirical(Not founded on research; not)

Opinions/Opinions

Is abortion right?

Is there life after death?

Independent Variable- Effect variable

Dependent Variable - the outcome; what we want to know about or studying (i.e. achievement, student identification in schools)

Educational Research – Research that addresses the issue you are trying to solve

Scientific Method – Develop hypotheses that you can test

Ethnography – Research in which you experience what the subject is experiencing

Experimental research- There is a control group and an experimental group

You want to follow standard conventions to ensure that your data is reliable and relevant.

To find a research instrument (for chapter 4), look at the following:

1. Tests in Print

2. When you read articles, write to the author of the article to determine what instrument was used

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- Databases for research - St. John's (Look for libraries)

- Look for the keywords
- Look for the list of references in articles to find additional articles/topics for research.
- It is fine to duplicate a study. Look for something that has a little “slant” in the research field. Continue the research of someone else to add to the perspective of the topic.
- How you define the concept deals with the way in which you measure the concept.
- The conceptual definition is related to the operational definition
- Look at the history of your topic. How has this concept been dealt with in various disciplines (business world, sociological world).
- Get a chronological history of your topic. Discuss how different things have been done over time in relation to your topic
- Curt Adams- Collective Teaching Efficacy to Influence Student Achievement (The proximate sources of teacher efficacy.)
- The design of the study is qualitative when it involves with interviews and surveys.
- Submit dissertation proposal to the IRB (Institutional Review Board) at St. John’s University.
- You need a sample size of at least 30 to do a statistical study.
- External Reliability - generalize the subjects in a study to include the
- Replication- Use the same process like the scientific method to achieve similar results.
- Instrumentation- the process of collecting data (how you went about collecting data for your research project)

#### For the Mini Dissertation Research Proposal

- Establish a definition for the problem
- State the problem- Why are you interested in studying this topic
- Synthesize relevant research articles
- Report Findings
- Build a case for an argument/discussion

To read the article, do the following:

- Briefly skim the article
- Look for key concepts and definitions in the study (Highlight the key terms)
- Look for how the sample was collected
- Determine the measurement tool or instrument for collecting data
- Determine what the unit of analysis is when deciding on what the subject will be

USE THIS AS A RESOURCE FOR THE DISSERTATION PROPOSAL THAT MUST BE SUBMITTED TO ST. JOHN'S UNIVERSITY ONLY (FOR THE MINI PROPOSAL PAPER, REFER TO PAGES 13&14 "GUIDELINES FOR THE DISSERTATION PROPSAL" IN THE DOCTORAL HANDBOOK)

## **THE ELEMENTS OF A PROPOSAL**

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### **1. Introduction**

- "The introduction is the part of the paper that provides readers with the background information for the research reported in the paper. Its purpose is to establish a framework for the research, so that readers can understand how it is related to other research" (Wilkinson, 1991, p. 96).
- In an introduction, the writer should
  - create reader interest in the topic,
  - lay the broad foundation for the problem that leads to the study,
  - place the study within the larger context of the scholarly literature, and
  - reach out to a specific audience. (Creswell, 1994, p. 42)

### **2. Statement of the Problem**

- "The problem statement describes the context for the study and it also identifies the general analysis approach" (Wiersma, 1995, p. 404).
- It is important in a proposal that the problem stand out--that the reader can easily recognize it. Sometimes, obscure and poorly formulated problems are masked in an extended discussion. In such cases, reviewers and/or committee members will have difficulty recognizing the problem.
- A problem statement should be presented within a context, and that context should be provided and briefly explained, including a discussion of the *conceptual or theoretical framework* in which it is embedded. Clearly and succinctly identify and explain the *theoretical framework* that undergirds your study. This is of major importance in nearly all proposals and requires careful attention. It is a key element that associations such as AERA and APA look for in proposals. It is essential in all quantitative research.
- State the problem in terms intelligible to someone who is generally sophisticated but who is relatively uninformed in the area of your investigation.

- For conference proposals, the statement of the problem is generally incorporated into the introduction; academic proposals for theses or dissertations should have this as a separate section.

### 3. Purpose of the Study

- "The purpose statement should provide a specific and accurate synopsis of the overall purpose of the study" (Locke, Spirduso, & Silverman, 1987, p. 5). If the purpose is not clear to the writer, it cannot be clear to the reader.
- Briefly define and delimit the specific area of the research. You will revisit this in greater detail in a later section.
- Foreshadow the hypotheses to be tested or the questions to be raised, as well as the significance of the study. These will require specific elaboration in subsequent sections.
- The purpose statement should also incorporate the *rationale* for the study. Some committees prefer this as a separate section, however. Check with your chair.
- Key points to keep in mind when preparing a purpose statement.
  - Try to incorporate a sentence that begins with "The purpose of this study is . . ." This will clarify your own mind as to the purpose and it will inform the reader directly and explicitly.
  - Clearly identify and define the central concepts or ideas of the study. Some committee chairs prefer a separate section to this end. When defining terms, make a judicious choice between using descriptive or operational definitions.
  - Identify the specific method of inquiry to be used.
  - Identify the unit of analysis in the study.

### 4. Review of the Literature

- "The review of the literature provides the background and context for the research problem. It should establish the need for the research and indicate that the writer is knowledgeable about the area" (Wiersma, 1995, p. 406).
- The literature review accomplishes several purposes.
  - It shares with the reader the results of other studies that are closely related to the study being reported (Fraenkel & Wallen, 1990).
  - It relates a study to the larger, ongoing dialogue in the literature about a topic, filling in gaps and extending prior studies (Marshall & Rossman, 1989).
  - It provides a framework for establishing the importance of the study, as well as a benchmark for comparing the results of a study with other findings.
  - It "frames" the problem earlier identified.
- Demonstrate to the reader that you have a comprehensive grasp of the field and are aware of important recent substantive and methodological developments.

- Delineate the "jumping-off place" for your study. How will your study refine, revise, or extend what is now known?
- Avoid statements that imply that little has been done in the area or that what has been done is too extensive to permit easy summary. Statements of this sort are usually taken as indications that the writer is not really familiar with the literature.
- In a proposal, the literature review is generally brief and to the point. Be judicious in your choice of exemplars--the literature selected should be pertinent and relevant (APA, 1994). Select and reference only the more appropriate citations. Make key points clearly and succinctly.
- Committees may want a section outlining your *search strategy*--the procedures you used and sources you investigated to compile your literature review. Check with your chair. And take special care to include those absolutely essential and seminal sources without which your review will smack of superficiality.

## 5. Questions and/or Hypotheses

- *Questions* are relevant to normative or census type research (How many of them are there? Is there a relationship between them?). They are most often used in qualitative inquiry. *Hypotheses* are relevant to theoretical research and are generally used in quantitative inquiry. When a writer states hypotheses, the reader is entitled to have an exposition of the theory that lead to them (and of the assumptions underlying the theory). Just as conclusions must be grounded in the data, hypotheses must be grounded in the theoretical framework.
- A *research question* poses a relationship between two or more variables but phrases the relationship as a question; a *hypothesis* represents a declarative statement of the relations between two or more variables (Kerlinger, 1979; Krathwohl, 1988).
- Deciding whether to use questions or hypotheses depends on factors such as the purpose of the study, the nature of the design and methodology, and the audience of the research (at times even the taste and preference of committee members).
- The practice of using hypotheses was derived from using the scientific method in social science inquiry. They have philosophical advantages in statistical testing, as researchers should be and tend to be conservative and cautious in their statements of conclusions (Armstrong, 1974).
- Hypotheses can be couched in four kinds of statements.

1. *Literary null*--a "no difference" form in terms of theoretical constructs. For example, "There is no relationship between support services and academic persistence of nontraditional-aged college women." Or "There is no difference in school achievement for high and low self-regulated students."
  2. *Operational null*--a "no difference" form in terms of the operation required to test the hypothesis. For example, "There is no relationship between the number of hours nontraditional-aged college women use the student union and their persistence at the college after their freshman year." Or "There is no difference between the mean grade point averages achieved by students in the upper and lower quartiles of the distribution of the Self-regulated Inventory." *The operational null is generally the preferred form of hypothesis-writing.*
  3. *Literary alternative*--a form that states the hypothesis you will accept if the null hypothesis is rejected, stated in terms of theoretical constructs. In other words, this is usually what you hope the results will show. For example, ""The more that nontraditional-aged women use support services, the more they will persist academically." Or, "High self-regulated students will achieve more in their classes than low self-regulated students."
  4. *Operational alternative*--Similar to the literary alternative except that the operations are specified. For example, "The more that nontraditional-aged college women use the student union, the more they will persist at the college after their freshman year." Or, "Students in the upper quartile of the Self-regulated Inventory distribution achieve significantly higher grade point averages than do students in the lower quartile."
- In general, the null hypothesis is used if theory/literature does not suggest a hypothesized relationship between the variables under investigation; the alternative is generally reserved for situations in which theory/research suggests a relationship or directional interplay.
  - Be prepared to interpret any possible outcomes with respect to the questions or hypotheses. It will be helpful if you visualize in your mind's eye the tables (or other summary devices) that you expect to result from your research (Guba, 1961).
  - Questions and hypotheses are testable propositions deduced and *directly derived from theory* (except in grounded theory studies and similar types of qualitative inquiry).
  - Make a clear and careful distinction between the dependent and independent variables and be certain they are clear to the reader. Be

excruciatingly consistent in your use of terms. If appropriate, use the same pattern of wording and word order in all hypotheses.

## 6. The Design--Methods and Procedures

- "The methods or procedures section is really the heart of the research proposal. The activities should be described with as much detail as possible, and the continuity between them should be apparent" (Wiersma, 1995, p. 409).
- Indicate the methodological steps you will take to answer every question or to test every hypothesis illustrated in the Questions/Hypotheses section.
- All research is plagued by the presence of confounding variables (the *noise* that covers up the information you would like to have). Confounding variables should be minimized by various kinds of *controls* or be estimated and taken into account by randomization processes (Guba, 1961). In the design section, indicate
  - the variables you propose to control and how you propose to control them, experimentally or statistically, and
  - the variables you propose to randomize, and the nature of the randomizing unit (students, grades, schools, etc.).
- Be aware of possible sources of error to which your design exposes you. You will not produce a perfect, error free design (no one can). However, you should anticipate possible sources of error and attempt to overcome them or take them into account in your analysis. Moreover, you should disclose to the reader the sources you have identified and what efforts you have made to account for them.
- **Sampling**
  - The key reason for being concerned with sampling is that of *validity*--the extent to which the interpretations of the results of the study follow from the study itself and the extent to which results may be generalized to other situations with other people (Shavelson, 1988).
  - Sampling is critical to *external validity*--the extent to which findings of a study can be generalized to people or situations other than those observed in the study. To generalize validly the findings from a sample to some defined population requires that the sample has been drawn from that population according to one of several *probability* sampling plans. By a *probability sample* is meant that the probability of inclusion in the sample of any element in the population must be given *a priori*. All probability samples involve

the idea of *random sampling* at some stage (Shavelson, 1988). In experimentation, two distinct steps are involved.

1. *Random selection*--participants to be included in the sample have been chosen at random from the same population. Define the population and indicate the sampling plan in detail.
  2. *Random assignment*--participants for the sample have been assigned at random to one of the experimental conditions.
- Another reason for being concerned with sampling is that of *internal validity*--the extent to which the outcomes of a study result from the variables that were manipulated, measured, or selected rather than from other variables not systematically treated. Without probability sampling, error estimates cannot be constructed (Shavelson, 1988).
  - Perhaps the key word in sampling is *representative*. One must ask oneself, "How representative is the sample of the survey population (the group from which the sample is selected) and how representative is the survey population of the target population (the larger group to which we wish to generalize)?"
  - When a sample is drawn out of convenience (a nonprobability sample), rationale and limitations must be clearly provided.
  - If available, outline the characteristics of the sample (by gender, race/ethnicity, socioeconomic status, or other relevant group membership).
  - Detail procedures to follow to obtain informed consent and ensure anonymity and/or confidentiality.

○ **Instrumentation**

- Outline the instruments you propose to use. If instruments have previously been used, identify previous studies and findings related to reliability and validity. If instruments have not previously been used, outline procedures you will follow to develop and test their reliability and validity. In the latter case, a pilot study is nearly essential.
- Because selection of instruments in most cases provides the operational definition of constructs, this is a crucial step in the proposal. For example, it is at this step that a literary conception

such as "intelligence is related to school achievement" becomes "scores on the WISK-R are related to Grade Point Average."

Strictly speaking, results of your study will be directly relevant only to the instrumental or operational statements (Guba, 1961).

- Include an appendix with a copy of the instruments to be used or the interview protocol to be followed. Also include sample items in the description of the instrument.
- For a mailed survey, identify steps to be taken in administering and following up the survey to obtain a high response rate.
- **Data Collection**
  - Outline the general plan for collecting the data. This may include survey administration procedures, interview or observation procedures. Include an explicit statement covering the field controls to be employed. If appropriate, discuss how you obtained *entré*.
  - Provide a general outline of the time schedule you expect to follow.
- **Data Analysis**
  - Specify the procedures you will use, and label them accurately (e.g., ANOVA, MANCOVA, ethnography, case study, grounded theory). If coding procedures are to be used, describe in reasonable detail. This labeling is helpful in communicating your precise intentions to the reader, and it helps you and the reader to evaluate these intentions.
  - Indicate briefly any analytic tools you will have available and expect to use (e.g., Ethnograph, AQUAD, SAS, SPSS, SYSTAT).
  - Provide a well thought-out rationale for your decision to use the design, methodology, and analyses you have selected.

## 7. Limitations and Delimitations

- A *limitation* identifies potential weaknesses of the study. Think about your analysis, the nature of self-report, your instruments, the sample. Think about threats to internal validity that may have been impossible to avoid or minimize--explain.
- A *delimitation* addresses how a study will be narrowed in scope--how it is bounded. This is the place to explain the things that you are not doing and why you have chosen not to do them--the literature you will not review (and why not), the population you are not studying (and why not), the

methodological procedures you will not use (and why you will not use them). Limit your discussion of delimitations to the things that a reader might reasonably expect you to do but that you, for clearly explained reasons, have decided not to do.

## 8. Significance of the Study

- Indicate how your research will refine, revise, or extend existing knowledge in the area under investigation. Note that such refinements, revisions, or extensions may have either substantive, theoretical, or methodological significance. Think pragmatically (*in the best sense of that word*).
- Most studies have two potential audiences: practitioners and professional peers. Statements relating the research to both groups are in order.
- This can be a difficult section to write. Think about *implications*--how results of the study may affect scholarly research, theory, practice, educational interventions, curricula, counseling, policy.
- When thinking about the significance of your study, ask yourself the following questions.
  - What will results mean to the theoretical framework that framed the study?
  - What suggestions for subsequent research arise from the findings?
  - What will the results mean to the practicing educator?
  - Will results influence programs, methods, and/or interventions?
  - Will results contribute to the solution of educational problems?
  - Will results influence educational policy decisions?
  - What will be improved or changed as a result of the proposed research?
  - How will results of the study be implemented, and what innovations will come about?

## 9. References (and click here)

- Follow APA (1994) guidelines regarding use of references in text and in the reference list.
- Only references cited in the text are included in the reference list; however, exceptions can be found to this rule. For example, committees may require evidence that you are familiar with a broader spectrum of literature than that immediately relevant to your research. In such instances, the reference list may be called a bibliography (APA, 1994, p. 334).

- Some committees require that reference lists and/or bibliographies be annotated. Check with your committee chair before the fact.

## 10. Appendixes

- The need for complete documentation generally dictates the inclusion of appropriate appendixes in proposals (although this is generally not the case as regards conference proposals).
- The following materials are appropriate for an appendix. Consult with your committee chair.
  - Verbatim instructions to participants.
  - Original scales or questionnaires. If an instrument is copyrighted, permission in writing to reproduce the instrument from the copyright holder or proof of purchase of the instrument.
  - Interview protocols.
  - Sample of informed consent forms.
  - Cover letters sent to appropriate stakeholders.
  - Official letters of permission to conduct research.

## 11. Strategies to Improve Writing Style (and click here) 💡

- Write from an outline, and use outline markers as research boundaries and manuscript headings. Remember that an outline
  0. helps preserve the logic of the research,
  1. identifies main ideas,
  2. defines subordinate ideas,
  3. helps avoid tangential excursions, and
  4. helps detect omissions.
- *Write*. Write, and keep writing at all costs. Write poorly if necessary, but get the prose on the page. Trust your editing and revising. **There are no good writers; there are only good rewriters.**
- *Incubate*. Put aside drafts and reread them after a delay. Work the manuscript in your mind during periods of relaxation. Remember that time and reflection are synthetic. This requires that you make good use of time, of course, and that you do not leave manuscripts until the last minute.
- *Proofread carefully*. Few things irritate committee members more than sloppy submissions. Trust me on this.
- *Read your own paper aloud*. Read it to a friend. Read it to a loved one (this is a powerful test of love).
- Have someone read key sections of your proposal to you. *Listen* to your own prose.
- Ask a colleague to critique the draft. Be prepared to accept the criticism. Become your own best critic.
- Form collegial groups devoted to discussing, reading, and critiquing manuscripts.

- Think of articles as *models*. How do the authors you admire handle the problems you confront?
- As regards precision and clarity, remember
  - **Word Choice** -- Make certain that every word means exactly what you intend it to mean.
  - **Colloquial Expressions** -- Avoid them.
  - **Contractions** -- Avoid them.
  - **Pronoun Use** -- Ensure that referent is obvious and appropriate.
  - **Comparisons** -- Avoid ambiguous or illogical comparisons (e.g., Ten-year-olds were more likely to play with age peers than 8-year-olds.)
  - **Attribution** -- be judicious in your use of
    - *Third Person* -- (e.g., The researcher instructed the participants)
    - *Anthropomorphism* -- (e.g., The program was successful in raising the self-esteem of the participants)
    - *We* -- (restricted to author and coauthors, royalty, and popes)
    - *Use of Headings* -- Headings are the signposts to direction of manuscript.
- Common Errors in Grammar and Usage
  - **Voice** - Prefer the active voice
    - Poor -- The experiment was designed by Gould (1980).
    - Better--Gould (1980) designed the experiment.
  - **Verb tense** - Use the past tense to express an action or a condition that occurred at a time in the past, as when discussing another researcher's work and when reporting your results.
    - Incorrect -- Bandura (1986) argues that high self-efficacy is beneficial to optimal functioning.
    - Correct -- Bandura (1986) argued that high self-efficacy is beneficial to optimal functioning.
  - Use the present tense to express a past action or condition that did not occur at a specific, definite time or an action beginning in the past and continuing to the present.
    - Incorrect -- Since that discovery, investigators used that method to reduce anxiety.
    - Correct -- Since that discovery, investigators have used that method to reduce anxiety.
  - Use past tense to describe your results (anxiety decreased significantly); use present tense to discuss your results and to present conclusions (results of this experiment indicate that anxiety-reducing interventions . . .).
- **Agreement in number of Pronoun and Antecedent**
  - Incorrect -- When a boy was called on in class, they were usually given more time to answer.
  - Correct -- When boys were called on in class, they were usually given more time to answer.
  - Correct -- When a boy was called on in class, he was usually given more time to answer.

- When a sentence contains the pronouns *they* or *their*, be certain you have a plural antecedent.

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**Sunday, February 11, 2007**

**This day was dedicated for group presentations from Cohort 5.**

**Friday, March 9, 2007**

**(THIS IS THE FORMAT FOR THE MINI DISSERTATION PROPOSAL.  
INLCUDE THIS INFORMATION IN YOUR PROPSAL)**

Cover Page

Abstract

Level I Headings

I Introduction

- Statement of the Problem
- Rationale or Purpose
- Definition of Terms

II Review of Literature (A reporting of the findings)

- At the end of your review of literature, discuss what you will do in you study and what has been done in the past concerning the research.
- Place your research questions after the literature review. (Summarize the findings of the literature.)
- Discuss the theoretical frame or lens that you will focus your research on.

III Methodology

- Summarize what you plan to do. Discuss how you plan to carry out the study.
- Research design- unit of analysis
- Procedures (recipe/cookbook) – Someone should be able to replicate your study. (This makes you research credible.)
- Talk about how you will collect the data. How will you select the people to participate in your study? How will you obtain permission to allow these people to participate
- What will you do with the data after you collect it?

#### IV Results

- How will you analyze your data (Data?)
- Will you analyze the themes as it applies to the data?
- Look at the archival records and interview data to determine what patterns emerge in the data.
- Report what you will do with your data (In proposal, there are no findings). For the actual dissertation proposal, report on you findings.

#### V Conclusion

- Summarize and discuss the limitations of the study
- Suggest future research efforts in this area
- If your study is qualitative, talk about how this can be done quantitatively.

Special notes concerning the mini dissertation proposal

Do not justify the margin

Qualitative Proposal means that is does not have a hypothesis, independent variable, and dependent variable

Look at the level 1, 3, and 4 headings in the APA Manual