

## Study Guide for Research

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### ***Congratulations!***

You've made it this far, completed the course work and are preparing for the "comps." We hope this guide will aid you in that preparation.

Should you require further assistance or have other questions, please don't hesitate to contact any of us in the Research emphasis.

### ***Best Wishes and Good Luck!***

- (1) Can you identify and distinguish among the basic families of research studies (i.e., descriptive, correlational, evaluation, experimental, causal comparative/ex post facto)?
- (2) Do you know the difference between narratively stating a:
  - (a) research question;
  - (b) problem statement;
  - (c) hypothesis?
- (3) Can you identify the related design methodologies pertinent to the various families of research studies?
- (4) Can you specify an appropriate sampling procedure pertinent to a given research question, problem statement or hypothesis?
- (5) Can you identify and discuss the form and format of related instrumentation and/or sources of information pertinent to a given research question, problem statement or hypothesis?
- (6) Can you identify appropriate quantitative and/or qualitative data analysis and reporting procedures to answer a given research question or test a given hypothesis?
- (7) Can you identify the related potential threats to internal and external validity associated with a given study design as well as how they might be mitigated by the researcher?

#### ***\*\*\*Potential review materials\*\*\****

- (i) EDR 610 curriculum especially Modules #2, #4 and #5:  
<http://jan.ucc.nau.edu/~mid/edr610>
- (ii) EDR 720 curriculum: <http://jan.ucc.nau.edu/~mid/edr720>
- (iii) Reading references follow.

**PLEASE NOTE: All references listed below are "Beverly Hills, CA: Sage Publications, Inc." unless noted otherwise.**

#### **"THE ESSENTIALS": BASICS OF A QUALITATIVE RESEARCH LIBRARY**

Brewer, John, & Hunter, Albert (1989). *Multimethod research: A synthesis of styles*.

*Already* a "citable classic," in terms of logically developed rationale for the ways in which multimethodologic designs/data collection procedures enhance study validity. A "must" for anyone using such procedures.

Patton, Michael Quinn (1990). *Qualitative evaluation and research methods* (2nd ed.).

*"The" compendium!* Great compilation of *all* of his previous works. *Highly* readable, including creative graphs, charts, anecdotes, etc. Covers "the basics" of such techniques as participant observation, in-depth interviewing, etc.

**OR:** the "bare bones" version of above is:

Patton, Michael Quinn (1987). *How to use qualitative methods in evaluation*.

Marshall, Catherine, & Rossman, Gretchen B. (1989). *Designing qualitative research*.

Chapter 3 is *outstanding* in terms of discussion of different types of qualitative research procedures, when to use each one, threats to validity, etc. Plenty of *readable*, illustrative "vignettes."

Miles, Matthew B., & Huberman, A. Michael (1984). *Qualitative data analysis: A sourcebook of new methods*.

You should at least plan to leaf through this book, if you don't choose to add it to your collection. It's *packed with creative examples of how to structure qualitative data in matrix format*, particularly *Section VII, Matrix Displays: Some General Suggestions* (pgs. 211-215).

Strauss, Anselm and Juliet Corbin. (1990). *Basics of qualitative research: Grounded theory procedures and techniques*. "The" Strauss (of Anselm and Strauss, the qualitative research ground-breakers -- please see reference to follow) made a dynamic and highly relevant contribution to "how to do it" with this excellent compendium of illustrating how to code qualitative data in ANY form in order to develop concepts/categories and emerge a theory. *A methodological breakthrough*.

Yin, Robert K. (1989). *Case study research: Design & methods* (Rev. ed.).

Chapters 1 & 2 are *invaluable sources of design terminology*. Rest of book is also a *source* of "how to," from planning the study to writing it up. Like Marshall & Rossman, lots of illustrative examples are provided.

Yin, Robert K. (1993). *Applications of case study research*.

The long-awaited sequel to Yin's classic first volume. Excellent discussion of "variables embedded within context" in qualitative studies, as opposed to the classic quantitative designs which have tended to study discrete variables in isolation. Updated to include the concept of multimethod triangulation. Part III is rich in applications to evaluation research.

### EVALUATION RESEARCH ESSENTIALS

Berk, Richard A., & Rossi, Peter H. (1990). *Thinking about program evaluation*.

A good "bare-bones" intro reader, prior to the following more specific text.

Rossi, Peter H., & Freeman, Howard E. (1989). *Evaluation: A systematic approach* (4th ed.).

"The" compendium for rigorous terminology, design specifications, *BUT* also *highly readable & generously illustrated with practical examples*. Don't get too lost in the equations; go for the topic-area discussion. I usually recommend that students read *AT LEAST*:

Chapter 1: Good overview of "what is evaluation research?";

Chapter 5: General design terminology;

Chapter 6: Specific experimental design terminology; and

Chapter 7: Specific non-randomized design terminology (most applicable).

### GOOD SUPPLEMENTARY EVALUATION RESEARCH SOURCES

Alkin, Marvin C. (1990). *Debates on evaluation*.

A *real surprise!* This one is essentially a transcript (including reviewers' commentary) of a UCLA Malibu conference held with many of the "leading lights" of evaluation research, such as Ernest House, Michael Q. Patton, and Carol Weiss. It is actually lively & *interesting reading!* Includes sections on utilization issues, needs assessment, political & ethical considerations.

Alkin, Marvin C., & Associates (1985). *A guide for evaluation decision makers*.

A bit "overly basic" & perhaps slightly "dated," but still good as a secondary source.

Fink, Arlene. (1993). *Evaluation fundamentals: Guiding health programs, research and policy*.

While not an applied educational textbook per se, this is the one I'd use to gain not only a solid foundation in evaluation basics but also other principles of quality research design.

Kettner, Peter M.; Robert M. Moroney; and Lawrence L. Martin. (1990). *Designing and managing programs: An effectiveness-based approach*. A goldmine of the entire cycle of the evaluation process -- including the authors' (correct) assertion that proper up-front planning and revision of desired outcomes needs more emphasis in the evaluation design.

Kosecoff, Jacqueline, & Fink, Arlene (1982). *Evaluation: A practitioner's manual*.

*Outstanding*: despite its "chronological age," could *easily* stand alone today as a research design book for evaluation research! Contains easy to follow coverage of all pertinent aspects, including sampling, design terminology, survey construction & even parametric & non-parametric statistical procedures. Liberally illustrated with examples throughout.

Levin, Henry M. (1983). *Cost-effectiveness: A primer*.

Great if you need help on "costing out" an evaluation in terms of budgeted costs & revenues, etc.

Love, Arnold J. (1991). *Internal evaluations: Building organizations from within*. A key consideration of some practitioner/researchers is selecting a topic/site/situation which is 'close to home.' This leads to the important area of an "insider" conducting evaluation research in order to draw upon his/her expertise regarding the problem or setting. This highly readable volume will provide a thorough grounding in the principles and key issues to be faced by such "insider"/researchers.

Majchrzak, Ann (1989). *Methods of policy research*.

McKillip, Jack (1987). *Need analysis: Tools for the human services and education*.

Shadish, William R., Jr., Thomas D. Cook and Laura C. Leviton. (1991). *Foundations of program evaluation: Theories of practice*. A good supplementary reference/volume of readings written by "leading lights."

### **FOCUS GROUP RESEARCH ESSENTIALS**

Krueger, Richard A. (1988). *Focus groups: A practical guide for applied research*.

"The" compendium: as readable, clear, well illustrated and yet rigorous a source on *everything* you need to know about planning & implementing focus group data collection procedures.

Morgan, David L. (1988). *Focus groups as qualitative research*.

Great as "advanced issues" reader for follow-up to Krueger. Effectively explains *how focus groups can be combined with other modes of data collection* (both quantitative & qualitative).

Morgan, David L. (1993). *Successful focus groups: Advancing the state of the art*.

Contains exceptionally well-written pieces by the leading lights of focus group interview procedures. Lots of general background sections (e.g., David Morgan's own "When to Use Focus Groups and Why") to detailed illustrative applications of the technique (e.g., Richard A. Zeller's "Focus Group Research on Sensitive Topics"; Robin Jarrett's "Focus Group Interviewing with Low-Income Minority Populations"). Perhaps the most outstanding feature of this book is its in-depth coverage of using focus groups as one aspect of multimethod research procedures (e.g., Wolff, Knodel & Sittitrai's "Focus Groups and Surveys as Complementary Research Methods").

Stewart, David W., & Prem N. Shamdasani. (1990). *Focus groups: Theory and practice*. An outstanding "update" and supplement to Krueger. Especially useful and well-written: Chapter Two on group dynamics (which in turn should provide the doctoral candidate with some 'chapter two' references on the origins/background of the focus group interview procedure) and the brief but well-explained reference to content analysis in Chapter Six on how to analyze focus group data.

### **SUPPLEMENTARY FOCUS GROUP RESOURCES (from marketing literature)**

Goldman, Alfred E., & McDonald, Susan Schwartz (1987). *The group depth interview: Principles & practice*. Englewood Cliffs, NJ: Prentice-Hall, Inc.

Greenbaum, Thomas L. (1988). *The practical handbook & guide to focus group research*. Lexington, MA: D.C. Heath & Company.

### **RESOURCES FOR THE TELEPHONE INTERVIEW**

Frey, James H. (1989). *Survey research by telephone* (2nd ed.).

Lavrakas, Paul J. (1987). *Telephone survey methods: Sampling, selection & supervision*.

### **GOOD "HOW-TO" SOURCES FOR SURVEY INSTRUMENTATION CONSTRUCTION**

Converse, Jean M., & Presser, Stanley (1986). *Survey questions: Handcrafting the standardized questionnaire*.

Fink, Arlene, & Kosekoff, Jacqueline (1985). *How to conduct surveys: A step-by-step guide*.

Fowler, Floyd J., Jr. (1988). *Survey research methods* (Rev. ed.).

### **OTHER GOOD SUPPLEMENTARY SURVEY DESIGN SOURCES**

Carmines, Edward G., & Zeller, Richard A. (1979). *Reliability and validity assessment*. Until recently, it was hard to find "a source" that documented and explained such important indices as Cronbach's alpha reliability coefficient. Don't let the date dissuade you from looking up this one -- it's still highly relevant!

DeVellis, Robert F. (1991). *Scale Development: Theory and Applications*. A unique and *MOST* valuable combination of essential research tools. The first half of the book takes the reader through a discussion of issues of reliability and validity. The second half applies these important measurement principles in the form of valuable tips on survey instrumentation construction. An important holistic look at measurement issues -- *HIGHLY* recommended!

Henry, Gary T. (1990). *Practical sampling*. A bit more advanced perhaps, yet thorough and well focused, discussion of all sorts of sampling schemes and procedures (which are the "flip side" of survey construction considerations -- e.g., the "with whom" issues). It is an easy temptation to "neglect" sampling considerations in favor of the "how/with what" of survey instrumentation construction.

Rossi, Peter H., Wright, James D., & Anderson, Andy B. (1983). *Handbook of survey research*. San Diego, CA: Academic Press.

I'd not get too sidetracked by the highly quantitative articles & move quickly into the "verbal-narrative" pieces, as excellent "advanced-type" sources to cite in my lit review, biblio, etc.

Spector, Paul E. (1992). *Summated rating scale construction: An introduction*. So much of our instrumentation involves a collection of Likert-scaled items which tap different, but often equally relevant, aspects of the same general construct (e.g., organizational climate). Yet, the mechanics of such "summated rating scales" have tended to be misunderstood and misused outside of marketing research until recently. This little monograph provides a highly readable and accurate introduction to this type of scale.

Sudman, Seymour, & Bradburn, Norman M. (1982). *Asking questions: A practical guide to questionnaire design*. San Francisco: Jossey-Bass, Inc. As *outstanding* as Fowler, Fink/Kosekoff & Coverse/Presser, in terms of being chock-full of examples, etc. I *only* put it here because it's in *hardback* & so is more expensive than the aforementioned (which are all available in paper from Sage). Still, it is a good investment & at least worth a look for its readability.

### **"REALITIES" OF LIFE IN THE FIELD**

Ellis, Carolyn & Michael G. Flaherty, editors. (1992). *Investigating subjectivity: Research on lived experience*. A collection of outstanding individual perspectives on capturing the often-elusive, but qualitatively illuminating, emotional component of subjects' perspectives.

Maruyama, Geoffrey, and Stanley Deno. (1992). *Research in educational settings*. DEFINITELY a HIGHLY RELEVANT "reality-based" discussion -- most candid in the "real" problems faced by the field researcher in education! A dissertation student's "must-have" guide!

Shaffir, William B., and Robert A. Stebbins, editors. (1991). *Experiencing fieldwork: An inside view of qualitative research*. One of the finest, most enjoyable readers I've found on the topic! Readings are divided into the various important phases of the 'realities' of: entering the field; getting comfortable with subjects & setting; maintaining positive relationships; and finally, the often overlooked but key issue of leaving the field and terminating the study. All of the pieces are outstanding; just a few "leading lights" are: A Walk Through the Wilderness: Learning to Find Your Way, by David Fetterman; Playing Back the Tape: Early Days in the Field, by John van Maanen; and Field-Workers' Feelings: What We Feel, Who We Are, How We Analyze, by Sherryl Kleinman. A must-have!

Whyte, William Foote, editor. (1991). *Participatory action research*.

### **THE POLITICS & ETHICS OF FIELD RESEARCH**

Sieber, Joan E. (1992). *Planning ethically responsible research: A guide for students and internal review boards*. Highly readable and relevant guidelines (including valuable case-study illustrations) of such sensitive yet unavoidable issues as confidentiality, privacy, deception and risk/benefit analysis regarding one's subjects.

Kimmel, Allan J. (1988). *Ethics and values in applied social research*. A "slightly older" but still readable version of the above, including pointers on methodologically grappling with such issues as protecting subjects' rights to privacy & confidentiality.

Punch, Maurice. (1986). *The politics and ethics of fieldwork*. Every doctoral candidate with 'dissertation horror stories' needs to read the author's experience of attempting to publish his own research findings, if only to know that he/she is NOT alone in navigating such sensitive issues! A mesmerizing first-person account.

### **SOURCES FOR THE "SUMMARY NARRATIVE" METHOD OF REPORTING QUALITATIVE RESEARCH FINDINGS**

Denzin, Norman K. (1989). *Interpretive biography*.

The researcher who coined the vivid term "*thick description*" to denote the key characteristic (& thereby value) of qualitative data. It is nicely described & generously illustrated in Chapter 5 of *Interpretive interactionism*.

McCracken, Grant. (1988). *The long interview*. A short but complete and highly readable compendium on processes and procedures for a *series of intensive interviews with one, or a smaller group, of subjects* (as opposed to the focus group setting as we usually think of it). We've had a couple of outstanding doctoral dissertations which have successfully applied McCracken's work.

### **OTHER EXCELLENT GENERAL QUALITATIVE RESEARCH SOURCES**

Atkinson, Paul. (1992). *Understanding ethnographic texts*.

Ball, Michael S., & Gregory W. H. Smith. (1992). *Analyzing visual data*.

Burgess, Robert G. (ed.) (1988). *Strategies of educational research: Qualitative methods*. London: Falmer Press.

Bogdan, Robert C., & Biklen, Sari Knopp (1982). *Qualitative research for education: An introduction to theory & methods*. Boston, MA: Allyn and Bacon, Inc. A neat little "primer" on qualitative basics; innovative charts & examples, which are still good, despite the book's being a little bit "dated" (e.g., doesn't of course include the more current "leading lights" such as Yin, Patton, & Rossi).

Carroll, John S. & Eric J. Johnson. (1990). *Decision research: A field guide*. Outstanding compendium of a type of design (decision research) that is highly relevant, yet not often recognized as such, by "action-oriented" educational researchers.

Crabtree, Benjamin F. & William L. Miller, editors. (1992). *Doing qualitative research*. If you can "forget" or work around the fact that the examples come out of the health sciences field, you will get a nice grounding and practical illustration of "good qualitative research in action" via this collection of readings.

Denzin, Norman K. (1989). *Interpretive interactionism*.

Eisner, Elliot W. (1991: MacMillan Publishing Company, New York). *The enlightened eye: Qualitative inquiry and the enhancement of educational practice*. Memorable metaphors that are sure to help you understand the distinction between quantitative and qualitative research problems, design and analytic procedures. Colorful, interesting writing style.

Eisner, Elliot W., & Peshkin, Alan (ed.) (1990). *Qualitative inquiry in education: The continuing debate*. New York: Teachers College Press, Columbia University.

Fetterman, David M. (1989). *Ethnography step by step*. Of interest (& well written too), if *only* to make clear the distinction & (hopefully) to dispel the still-widely-held myth that "all qualitative research is ethnographic in nature as well."

Fowler, Floyd J., Jr., & Mangione, Thomas W. (1990). *Standardized survey interviewing: Minimizing interviewer-related error*.

Gilbert, Nigel, ed. (1993) *Researching social life*. Although British in examples in phraseology, this is one of the most valuable research design compendiums generally. Contains a well-written chapter on "Qualitative Interviewing" (as well as a companion chapter on survey research). Page 199 contains one of the finest explanations of alternative forms/methods of multimethod triangulation.

Glaser, Barney G., & Strauss, Anselm L. (1967). *The discovery of grounded theory: Strategies for qualitative research*. New York: Aldine de Gruyter.

The "classic" conceptual justification for "collecting data in words, vs. just numbers." This is the work that inspired applications, model development, technical procedures, etc., by later researchers such as Yin, Patton and Miles & Huberman. *Definitely* worth reading and adding to your Chapter 2 discussion of the historical evolution of qualitative research.

Hammersley, Martyn, ed. *Social research: Philosophy, politics and practice*. (1993). A collection of "think pieces" by the leading lights of research. Janet Ward Schofield's "Increasing the Generalizability of Qualitative Research" is an outstanding explanation of the differential meaning of this term in qualitative, as opposed to quantitative, research designs. It is a "must" for anyone contemplating a qualitative study in terms of formulating Chapter One delimitations. Janet Finch's "It's Great to Have

Someone to Talk To: Ethics & Politics of Interviewing Women" is another especially valuable contribution to this important volume.

Johnson, Jeffrey C. *Selecting ethnographic informants*. (1990). Issues of "proper" sampling procedures regarding qualitative, as opposed to quantitative, research designs are often accidentally confused. This brief monograph helps clarify and provides tips on subject selection and related sampling schemes for qualitative investigations.

Jorgensen, Danny L. (1989). *Participant observation: A methodology for human studies*. I'd start with Michael Patton's excellent coverage on "how to do participant observation," but definitely *follow up* with *this* one, if that is the particular qualitative procedure which you are planning to use.

Josselson, Ruthellen & Amelia Lieblich, eds. (1993)*The narrative study of lives*.

Merriam, Sharan B. (1989). *Case study research in education: A qualitative approach*. San Francisco: Jossey-Bass, Inc. Its greatest value is *not* in teaching you about what qualitative research is, the different types, etc., --- BUT it is a *great* compendium of citations of secondary sources which would be good to track down & cite for your Chapter 2.

Now, here's a *delightful* "trio" from Michael Quinn Patton, virtually the "founding father" of evaluation research. Again, their content is nicely collapsed into the 1990 evaluation research book. Still, these are *well* worth browsing through for the clever anecdotes, quotes, & cartoons!

Patton, Michael Quinn (1981). *Practical evaluation*.

Patton, Michael Quinn (1986). *Utilization-focused evaluation*.

Patton, Michael Quinn (1987). *Creative evaluation (2nd. ed.)*.

Richardson, Laurel. (1990). *Writing strategies: Reaching diverse audiences*.

Rose, Dan. (1990).*Living the ethnographic life*.

Rosenthal, Robert. (1991, revised edition). *Meta-analytic procedures for social research*. The "founding father" of this MOST valuable analytic procedure for compiling results across multiple studies of a given phenomenon guides the reader through the basic principles.

Sherman, Robert R., & Webb, Roedman B. (1988). *Qualitative research in education: Focus and methods*. London: Falmer Press.

van Maanen, John (ed.). (1983). *Qualitative methodology*. A now-classic reader of "early" yet still relevant discussions on the key issues involved in qualitative research (includes the first reference to multimethod "triangulation" in research and also Matthew Miles' characterization of qualitative data collection & analysis as an "attractive nuisance.").

Weller, Susan C., & Romney, A. Kimball (1988). *Systematic data collection*.

#### **SPECIAL APPLICATIONS: INCLUDES SOFTWARE & DATA COMPILATION PROCEDURES**

Pfaffenberger, Bryan (1988). *Microcomputer applications in qualitative research*.

Tesch, Renata (1990). *Qualitative research: Analysis types & software tools*. London: Falmer Press.

Weber, Robert Philip (1985). *Basic content analysis*.

#### **FOR THE DISSERTATION CANDIDATE'S "HOW TO WRITE" BOOKSHELF**

Coley, Soraya M., and Cynthia A. Scheinberg. (1990). *Proposal writing*.

Locke, Lawrence F.; Waneen Wyrick Spirduso; and Stephen J. Silverman. (1987). *Proposals that work: A guide for planning dissertations and grant proposals*.

Rudestam, Kjell Erik & Rae R. Newton. (1992). *Surviving your dissertation: A comprehensive guide to content and process*. THE ULTIMATE "MUST-HAVE" DOCTORAL REFERENCE!!! While I wouldn't go by the ORDER in which they say to present dissertation chapter topics & subtopics (for that, I'd strongly recommend that you use the first several pages of our dissertation seminar handbook), I'd definitely urge you to read the first half for *CONTENT OF EACH SUBTOPIC ITEM* and the second half for some valuable *TIPS IN NAVIGATING THE DISSERTATION WRITING AND DEFENSE PROCESS!*

## Guidelines for Research Comps Rubric – June '09

Rating Category	Guidelines
Statement of the Problem	<ul style="list-style-type: none"> <li>--Articulates the <i>why</i> of the study</li> <li>--Articulates the <i>importance</i> of the study</li> <li>--Indicates an existing <i>need</i> for the information that the proposed study will provide</li> <li>--<i>Aligns key concepts</i> contained therein with those in the upcoming purpose of the study, related research questions and (if relevant—for quantitative studies) hypotheses</li> </ul>
Purpose of the study, along with related research questions and hypotheses (if applicable)	<ul style="list-style-type: none"> <li>--Purpose of the study identifies the <i>what</i> of the study: the <i>driving-force curiosity</i></li> <li>--Purpose of the study is <i>clear and focused</i></li> <li>--Purpose of the study is <i>worded objectively</i> (e.g., <i>no subjective, judgmental terms</i> such as 'good')</li> <li>--Related research questions <i>logically flow from overall purpose of the study</i></li> <li>--Related research questions are <i>more focused</i>, yet still <i>open-ended</i>, facets of curiosity emanating from the purpose of the study (<i>not accidentally dichotomous</i>: e.g., yes/no only)</li> <li>--Related research questions are each of singular focus (<i>no accidentally multiple-barreled questions</i>: 2 or more distinct questions combined into one)</li> <li>--Related research questions are <i>worded objectively</i> (e.g., <i>no subjective, judgmental terms</i> such as 'good')</li> <li>--(for inferential quantitative studies only)</li> <li>Hypotheses are <i>worded objectively</i> (e.g., <i>no subjective, judgmental terms</i> such as 'good')</li> <li>--Hypotheses are each of singular focus (<i>no accidentally multiple-barreled questions</i>: 2 or more distinct questions combined into one)</li> <li>--Hypotheses contain the descriptor <i>significant</i> or <i>significantly</i> to rule out tiny magnitudes that may not be practically meaningful</li> <li>--Hypotheses are <i>appropriately sorted into null and alternative forms/formats</i></li> <li>--Hypotheses are <i>testable</i> in their present wording</li> <li>--Key concepts of focus in the research study are <i>aligned across purpose, research questions and</i> (if relevant-inferential quantitative studies) <i>hypotheses</i></li> </ul>
Significance of the study	<ul style="list-style-type: none"> <li>--Identifies the <i>value, benefits, beneficiaries</i> and <i>contributions</i> of the study</li> <li>--<i>Aligned with key concepts</i> contained in problem, purpose, research questions and any hypotheses</li> </ul>
Design methodology terms	<ul style="list-style-type: none"> <li>--Cites <i>specific design methodology term(s)</i> that pertain(s) to proposed study (e.g., experimental, evaluation, ex post facto, case study, ethnography, phenomenology)</li> <li>--Provides <i>brief supporting rationale</i> for <i>how</i> each methodology design descriptor identified above aligns with the proposed research study</li> </ul>
Population and sample	<ul style="list-style-type: none"> <li>--Provides <i>clear, complete operational definition of the target population</i> to whom the study is intended</li> </ul>

	<p>to apply</p> <ul style="list-style-type: none"> <li>--As part of the above, identifies any specific pertinent <i>inclusion and/or exclusion criteria</i></li> <li>--Identifies <i>specific sampling terminology</i> pertinent to how the sample will be selected from the above target population (e.g., simple random, stratified, convenience, purposive, cluster, census/canvass)</li> <li>--Provides <i>brief supporting rationale</i> for how each sampling descriptor identified above</li> <li>--Identifies issues of <i>optimal sample size</i> for the needs of the proposed study</li> </ul>
Instrumentation/sources of information	<ul style="list-style-type: none"> <li>--Identifies and describes <i>specific data-gathering vehicles</i> appropriate to the purpose of the study (e.g., survey, interview, observational protocol, field notes)</li> <li>--For each data-gathering vehicle above, describes the <i>subtopics/content areas</i> for which data are to be gathered</li> <li>--Subtopics/content areas are clearly <i>aligned</i> with the research concepts of focus of the study</li> <li>--For surveys and observational protocols, identifies the <i>specific scale of measure of responses</i> (e.g., Likert-type rating items, including number of response choices and nature of labeling, if any, of these choices; check-off, fill in the blank, other)</li> <li>--Identifies the <i>frequency/duration of measurement</i>, if applicable (e.g., <i>how often</i> and <i>for how long</i> field notes or observations are to be recorded)</li> <li>--Identifies and discusses any planned <i>pilot-test procedures</i></li> <li>--For existing <i>archival</i> data, identifies their <i>specific nature</i> (e.g., types of students' standardized test scores), as well as <i>where/how they are housed</i>, under a "Sources of Information" subheading</li> </ul>
Validity and reliability issues related to data sources above	<ul style="list-style-type: none"> <li>--Distinguishes correctly between these 2 key qualities of good measurement: 1) <i>validity</i>: <i>credibility, believability, integrity</i> of measurement (Am I <i>really</i> measuring what I <i>think</i> I'm measuring? Or accidentally picking up the effects of <i>something else</i> in my measurement?) 2) <i>reliability</i>: <i>consistency, stability, predictability</i> of measurement</li> <li>--Cites <i>specific validity and reliability procedures</i> to be applied to the sources of information/data cited in the preceding line (e.g., concurrent validation, content validation, confirmatory factor analysis, test-retest reliability, split-half reliability, Cronbach's alpha)</li> <li>--Provides <i>brief supporting rationale</i> for each validity/reliability method cited above</li> </ul>
Data collection procedures	<ul style="list-style-type: none"> <li>--Outlines a <i>step-by-step action plan for carrying out the proposed study</i> and gathering the information evidence or data</li> </ul>
Data analysis procedures	<ul style="list-style-type: none"> <li>--Aligns each proposed quantitative and/or qualitative data reporting/analysis procedure with the specific research question/hypothesis to which it pertains</li> <li>--For <i>quantitative</i> data, identifies <i>summary descriptive</i> (e.g., absolute/relative frequencies; mean/median/mode; standard deviation) <i>and/or inferential statistical tools</i> to be applied to answer</li> </ul>



	<p>quantitative research questions/hypothesis testing, along with supporting rationale (e.g., ANOVA along with F-test and any necessary post hoc follow-up between-group difference testing; for regression analysis, states the predictive model along with such related statistics as F-test of the regression equation, t-tests of individual regressors and R<sup>2</sup>/adjusted R<sup>2</sup> for variance explained by the predictive model)</p> <p>--Identifies <i>pre-determined Type I alpha error rate</i> for such hypothesis testing (e.g., 0.05, 0.01, 0.10, other)</p> <p>--For <i>qualitative</i> data, identifies <i>specific data reduction/coding procedures</i> to be applied to derive key themes</p> <p>--For <i>qualitative</i> data, indicates whether initial thematic coding will come from <i>an existing theoretical/conceptual framework</i> related to the study variables of focus, or whether such coding will be done via <i>inductive, exploratory, emergent grounded theory</i> style, along with <i>supporting rationale</i> for either choice</p> <p>--For <i>mixed-methods/multi-method</i> studies, discusses as a final step of data analysis how the findings from multiple data sources will be <i>triangulated</i> to identify areas of <i>convergence/divergence</i> of respective findings</p>
<p>Writing structure (grammar, punctuation, APA format/style)</p>	<p>--Narrative is logically organized according to the stated components of the comps instructions</p> <p>--Narrative is free from grammatical errors</p> <p>--Narrative is free from punctuation errors</p> <p>--Narrative is compliant with current APA format and style guidelines</p> <p>--Narrative flows well as a cohesive whole in content and tone</p>