Reverse Engineering a Journal Article

EDUC 7310: Research I Design and Methods

The purpose of this assignment is to read and examine critically all sections of a peer-reviewed journal article. As a student of educational research, it is imperative that you gain familiarity and comfort with the structure/purpose of the scientific literature.

For each critique, you will select one quantitative research article published within the last five years in a peer-reviewed journal. You are free to select any article from any reputable, peer-reviewed journal under the following conditions:

1. The topic of research and theoretical framework are unrelated to your planned dissertation.
2. However, the author(s) utilized quantitative methodology similar to or identical to that of your own planned research, as you currently understand it.

1. Summary
Summarize the results and *implications* of the article under review. Be sure to highlight as many key details from the study to help you. For example, address the who, what, when, where, and how regarding what the author(s) did to obtain the results. Read the last half of the article abstract to get a good idea about what to include in this section.

2. Introduction/Literature Review
Closely examine the introduction and/or literature review sections of your selected journal article. Describe the current study's rationale in the larger context of the larger discipline, theory, and/or literature from which it comes. How does it fit with what's already known about the research problem? In fact, in your own words, summarize the research problem. What are the research questions and hypotheses guiding the study? *Note*: these may or may not be explicitly stated so you may have to infer.

3. Sample
Report major demographic characteristics (e.g., age, sex, ethnicity, SES, etc.). Report all topic-specific characteristics (e.g., first-year teachers, female high school principals, advanced practice registered nurses, etc.). Address any inclusion and exclusion criteria used among the population from which the sample was drawn. Describe all procedures the author(s) used during participant selection. Address specifically how the author(s) recruited participants (if provided). Describe the sampling method used.

4. Study Design
Describe succinctly the type of experiment/study design the author(s) implemented. Describe the nature of the study. Is it an experiment? Is it a quasi-experiment? Is it an observational study? Is it longitudinal? Don't just identify the experiment/study design, write about it as if it's your responsibility to author the first paragraph of its Wikipedia page entry (e.g., randomized control trial).

5. Instrumentation/Materials
List and describe any and all instruments, measures, tools, etc. the author(s) used to collect their data.

6. Data and Statistics
List each research question again and attempt to identify all variables, their scale of measurement, type, and levels. Were any variables coded, categorized, or relabeled? Further, identify and describe the statistical method(s) the author(s) used when analyzing the data, testing hypotheses, and answering the research question(s). What type of inferential statistics and/or hypothesis tests did the author(s) implement? If provided, describe all figures. How did the author(s) handle any missing data?

7. Future Directions
What are the logical next steps to extending this study? What's missing? Address any limitations you can identify.