

Chapter Three: Methodology



The Gorilla of Research

Prepared by Dr. John "Jack" W. Billings

Website Resources

- ▶ Applied Dissertation Guide: <http://education.nova.edu/applied-research/forms/FGAD.pdf>
- ▶ Institutional Review Board [GENERAL information]
<http://education.nova.edu/applied-research/forms/irb-general-info.pdf>
- ▶ Institutional Review Board [REQUIREDDOCUMENTS]:
http://education.nova.edu/applied-research/forms/required_IRB_documents.pdf
- ▶ Quantitative Template Method:
<http://education.nova.edu/applied-research/forms/fse-dissertation-template-quantitative-methods.doc>
- ▶ Qualitative Template Method: <http://education.nova.edu/applied-research/forms/fse-dissertation-template-qualitative-methods.doc>
- ▶ Mixed Methods Template: <http://education.nova.edu/applied-research/forms/fse-template-mixed-methods.doc>

Audience Sensitivity

Without a doubt, the greatest challenge for an academic writer is a passive audience: individuals engaging your work having no personal experience of you, your study location or your proposed work. You *must* assist your audience in seeing what you see!
Imagine the following...

A Recipe for Making Cupcakes

Follow these steps:

- Preheat the oven.
 - Grab a big bowl.
 - Break some eggs with the milk.
 - Add the exact amount of oil.
 - Empty the box and throw it away.
 - Grease the pan.
 - Wait for ingredients to blend and are nice and smooth.
 - You can make them smooth by hand or with an electronic mixer.
 - Pour the mixture into the pots equally.
- Here is a good suggestion: bang the pan down on the counter hard.
 - Put everything in the oven.
 - It is best to put it in the middle of the oven so it cooks evenly.
 - Do not open the oven!
 - When the time is up, take the pan out and let it cool.
 - By the way, they come out better if you use cupcake liners.
 - Make sure you use pot holders when you grab them.

Success in Academic Writing

- Start all chapters with an introduction: orienting the audience to a specific purpose [*the heading 'introduction' is not required*].
- Include all anticipated/expected headings in exact order remembering the expressed purpose for each.
- Draft strong topical sentences [*consider writing and submitting a topical sentence outline to the chairperson before developing paragraphs*] and maintain paragraph integrity.
- Avoid pronouns [personal/demonstrative] to avoid confusion and the potential exclusion of the audience.
- Support assertions and methodological decisions with citations.

Methodology

The Goal

- Convey and defend *exactly* what you intend to do within your study leaving no audience questions unanswered.
- Convey and defend to a universal audience *exactly* what you intend to do within your study: allowing others to replicate.
- Convey and defend to the university's Institutional Review Board (IRB) *exactly* what you intend to do within your study to earn consent to act [especially if engaging human subjects].

Chapter Three: Methodology

Write an introduction: a contract with your audience. The introduction should orient an audience to the purpose of the chapter and then succinctly present and justify the chapter's organization.

Participants

Start with the population: identify all within the study sight sharing common characteristics from which a sample will be extracted. Move to a sample. How will you select *[random]*? How many will be in the sample *[representative, generalizable]*? A sample can be the population. But if selecting a percentage defend why? Will the sample be 'significant'? Does the PI have the right to access the population/sample, and if not, how will the PI gain access?

Informed consent. How will participants be approached? How will participants be oriented to the study and consent to participate? If informed consent is not required defend the decision.

NOTE: remember accessing certain data will require navigation and perhaps consent.

Chapter Three: Methodology [cont'd.]

Instruments

What data collection instruments will be used within the study and defend selections using the literature review *[A review of methods is a required section of the literature review]*?

If the instruments are original, discuss how each were created and tested for applicability and reliability *[The origination of instruments can be a dissertation: seek preexisting tools]*.

If the instruments pre-exist will the PI use 'as is' or modified? If modified discuss and defend how. What kind of data will be gathered *[quantitative, qualitative or mixed]*?

Validity. Defend the instrument's likelihood to measure/assess as purported. Report published coefficients if available *[qualitative tools may not have validity determinations]*.

Reliability. Defend the instrument's applicability across a variety of settings so long as protocols are followed. Report published coefficients if available.

Chapter Three: Methodology [cont'd.]

Procedures/Data Collection

- Describe, *exactly*, what will occur within the study [*remember the cupcakes?*]. Details should be sufficient to meet the needs of any new, universal or passive audience.
- The procedures need to be presented in a logical, predictable and sequential way.
- Avoid sweeping statements, for example: *"The teachers will be required to attend staff development sessions before beginning the implementation."*
- If steps require the use of forms, correspondences or special procedures refer to, and include each within an appendix (Appendix A).
- When discussing data collection, include who, when, where and how? If using specific questionnaires, surveys or inventories include copies of each in an appendix.

Chapter Three: Methodology [cont'd.]

Data Analysis/Analyses

Once data is obtained, exactly what will be done with the data, by whom and for what reason?
Your text here

Will you use a *t* test for dependent samples, a frequency scale or perform an ANOVA?

Operationally, what will “significance” mean within your study?

Expected/Anticipated Outcomes

What does the Principal Investigator anticipate from the study? What would success look like?

Limitations

What are the implied shortcomings of your proposed work? For example: will a sample of convenience preclude generalizing findings? Will the PI be the study administrator, data collector and analyzer? Are the findings restricted to the location?

Website Resources

- ▶ Applied Dissertation Format Guide: <http://education.nova.edu/applied-research/forms/FGAD.pdf>
- ▶ Dissertation Template for Quantitative Methods: <http://education.nova.edu/applied-research/forms/fse-dissertation-template-quantitative-methods.doc>
- ▶ Dissertation Template for Qualitative Methods: <http://education.nova.edu/applied-research/forms/fse-dissertation-template-qualitative-methods.doc>
- ▶ Dissertation Template for Mixed Methods: <http://education.nova.edu/applied-research/forms/fse-template-mixed-methods.doc>
- ▶ Dissertation Template for Program Evaluations: <http://education.nova.edu/applied-research/forms/fse-template-prog-eval.doc>

Resources

Dr. Jack Billings has published two resources to assist doctoral students. Email jbilling@nova.edu and request either or both.

NSU Applied Dissertation: delineates all anticipated/expected dissertation headings, in APA 6.0 format and in order by chapter. Under each heading there is a brief description of what a scholarly audience would expect to read.

Statistics Monograph [Statistics for Dummies]: The document isolates the most common statistical analyses, provides anecdotes assisting students to select appropriate analyses and then a simple explanation of how to perform each analytical method.