

## Information Literacy Faculty Fellows Project – Kirsten Kinzer

Integrating Information Literacy into Quantitative Methods in Public Administration  
A semester project in three assignments

### Summary

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This assignment spans the full semester but is introduced gradually in smaller assignments. In Part One, students pick a data set from six choices, identify a broad research question, and explore relevant variables with descriptive statistics and simple data visualizations. In Part Two, students complete an abbreviated literature review by synthesizing five articles related to their research question. During a subsequent in-class workshop, students refine their initial research questions based on their literature review and begin the process of matching statistical tests to their research question. The final assignment for the semester asks students to fully develop a statistical analysis that responds to their research question and conclude with one or more policy recommendations that builds from their findings.

The assignment has three goals: the first is to help students understand that their research is part of a larger scholarly conversation in that it builds from and adds to existing research. The second goal is to encourage students to apply the statistical tests learned in class to a complex data set, guided by a research question that interest them. The final goal is to prepare students for the basic elements of the capstone project that they will complete at the end of their Master of Public Administration coursework (including identifying a research question, completing a literature review, analyzing data, and proving policy recommendations).

### Assignments

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#### Part One: Data selection and initial research question development

This week we kick-off the semester project by picking a data set, writing a preliminary research question, and applying what we've learned about descriptive stats and data visualization to explore a few variables. Follow the directions below and upload a PDF to Canvas that shows your work.

1. Pick the data set that is most interesting to you from the following choices (more information on the choices can be found in *Exercising Essential Statistics for Public Managers and Policy Analysis* by Evan Berman and XiaoHu Wang, 2017):
  - Public perceptions: resident perceptions on issues local government should prioritize and on service quality, Orange County, Florida
  - Employee attitudes: survey of Seminole County Government employees
  - Community indicators: secondary data on quality of life in 98 American cities

- Watershed health: US EPA watershed health indicators data on 2,260 watersheds
  - Crime: time-series data from a Midwestern city that has implemented a juvenile crime reduction program
  - Conservation spending: conservation spending and demographic data from 66 counties in Florida
2. Based on our discussion of crafting a strong research question, write a research question that you could answer with this data set. Make sure this research question interests you because it will be the jumping off point for your semester project.
  3. Pick three variables that are related to your research question to explore with descriptive statistics. Use SPSS and/or Excel to calculate the appropriate descriptive stats related to these variables (remember that nominal or ordinal data coded as numbers is still categorical).
  4. Use Excel to create three graphics showing the distribution of the three variables (a histogram, pie chart etc.).
  5. Describe the data set verbally, based on the variables you've selected. Integrate the descriptive stats and graphics you've created into your description.

## **Part Two: Literature review**

This week, you will start working on the literature review that you'll include in the final version of your semester project. Next week in class, we'll refine your research question based on the literature that you find while working on this assignment.

Your assignment is to find five articles in academic journals related to your data set and the initial research question that you picked for the semester project. It's likely that you'll need to skim more than five to find the articles that are the most relevant to the general focus of your project. Upload a draft literature review covering these articles with citations for each article. The review should synthesize the major findings and unanswered questions identified in each article in your own words.

Save the articles somewhere that you can access in class (e.g. One Drive). In the workshop next week, we'll build from your summary to a refined research question and from there, to a match between the statistical tests we've covered so far and your research question.

Use these databases to search for articles:

- Public Affairs Information Service (library log-in required)
- JSTOR (library log-in required)
- Google Scholar (set UNCW as your library and Google Scholar will link you to articles available here).

### Part Three: Final paper and presentation

In the final paper and presentation, you will answer your research question through a statistical analysis that is informed by your literature review. Your goal with the final paper is to demonstrate what you've learned in the course, formatted as a professional report. The reader should learn what prior research tells us about your topic, how these existing studies frame your research, and what new information you have learned through your analysis. Finally, the report should conclude with one policy recommendation supported by your quantitative findings.

The sections listed below are intended to give you a recommend structure for the paper and guidelines for contend. With the exception of the executive summary, you are not required to use these exact headings or sections. If you would like more detailed guidelines see "Writing Reports" on Canvas (Chapter 15 in *Research Methods and Statistics for Public and Nonprofit Administrators: A Practical Guide*, Nishishiba, Jones, and Kraner, 2014).

**Executive summary** This section should cover everything in your report from the research question to your recommendations. With any professional report, some people will only read the summary so any critical takeaways should be here.

**Intro** A broad introduction to the data set that you're working with should be included here, including descriptive stats and data visualizations related to the variables that are most important to your project (you began this section in Part One but will probably need to expand from there).

**Literature review** Review all five articles here even if you are only responding to one in your study. Your goal is to synthesize, not just summarize each article in an individual paragraph. The second goal of this section is to set up your research question by framing it as an extension of the articles included in your literature review.

**Methods** Your research question, hypothesis, and the statistical tests you used should be covered here. It's likely that you will run some tests that didn't lead to statistically significant results. Mention them here and include the results in an appendix so I can give you credit for this work.

**Results** This section is fairly self-explanatory – include an overview of your results here. Depending on what tests you ran, include tables showing your results but be sure to edit these tables rather than just copying and pasting from SPSS (there is too much information in the SPSS tables).

**Discussion and recommendations** Did you find the results you anticipated or that your literature review suggested you would find? Discuss your thoughts on why your results differed from your expectations or what it means if they support your hypothesis.

Based on your findings, make one or more policy recommendations. This class isn't focuses on policy development, so I won't evaluate the substance of the recommendation. I'm interested in the connection between your quantitative findings and a recommendation.

**Conclusion** Wrap up the report by summarizing your findings, explaining what they add to what we already knew about this topic, and discussing any further studies that could come next. Don't introduce any completely new ideas here.

**Formatting** Your goal is to create a document that looks like a professional report, not a student paper. See the examples on Canvas for some ideas of how other Quantitative Methods students approached formatting the semester project as a professional report.