Appendix

Table A.1 Political Science 200 Course Outline

Unit	Course Material	Individual Assignment
1	Course Introduction – Political "Science"?	
2	Epistemology	
3	Research Questions	Article Analysis
4	The Literature Review	
5	Concepts and Measurement	
6	Correlation and Causality	Research Design and Case Selection
7	Research Design	
8	Case Selection	
9	Textual Analysis	
10	Interviewing	Qualitative Textual Analysis
11	Ethnography	

Table A.2 Political Science 200 Rubric for Active Learning Exercises

Level of Engagement	- Consistent proactive contribution to group activities and debriefing sessions	- Contributes to activities and debriefing sessions but in a passive role (e.g., listening and note-taking)	- Attends but is not a consistent participant in group activities	- Absent for the majority of active learning sessions
	(A)	**(B)**	**(C)**	**(F)**
Preparedness	- Always arrives to active learning sessions fully prepared	- Arrives to activities with passing knowledge of relevant readings	- Clear that the student rarely reads course material or attends lectures	- Absent for the majority of active learning sessions
	(A)	**(B)**	**(C)**	**(F)**

POL 200 Questionnaire CODEBOOK

In POL 200 this term, new activities to better help you learn about research techniques in political science were incorporated into the course. This questionnaire is to collect your opinion of what you have learned. It is both **anonymous** and **voluntary**. Whether or not you complete the questionnaire will not influence your grade in the course. The data may be presented in an academic journal or at a conference. Only aggregate results are reported so that the results cannot be identified with you.

Completing and handing in this questionnaire indicates your consent to participate. Your opinion is highly appreciated. Thank you!

1. **What are your research skills in political science like NOW that you have [nearly] completed POL 200?**

    Now that you have almost completed the course mark the box below that indicates whether you can understand and complete the following research tasks.

	Strongly Disagree (-1)	Disagree (-0.5)	Neutral (0)	Agree (0.5)	Strongly Agree (1)
a. I can identify the core research question in a political science paper and understand its broader relevance.	☐	☐	☐	☐	☐
b. I understand what makes an interesting research question in political science.	☐	☐	☐	☐	☐
c. I can produce my own empirical research question on a topic of interest.	☐	☐	☐	☐	☐
d. I can easily identify the main concepts in a political science research paper I have read.	☐	☐	☐	☐	☐
e. I can define a concept and suitable measures for my research papers in the future.	☐	☐	☐	☐	☐
f. I can evaluate whether a scholar has a presented a causal argument, or one based only on correlation.	☐	☐	☐	☐	☐
g. I can explain the causal argument of a paper verbally	☐	☐	☐	☐	☐
h. I can explain the causal argument of a paper in writing	☐	☐	☐	☐	☐

	Strongly Disagree (-1)	Disagree (-0.5)	Neutral (0)	Agree (0.5)	Strongly Agree (1)
i. I can identify the basic menu of research design options (e.g., large-n statistical vs. small-n case study) and explain the benefits and tradeoffs of each.	☐	☐	☐	☐	☐
j. I understand why using an appropriate case selection strategy for a given research question can improve internal and/or external validity.	☐	☐	☐	☐	☐

2. What were your research skills in political science like BEFORE you began POL 200?

Think back to what you knew and could do before taking POL 200 and mark the box below that best indicates to what extent you could understand and complete the following research tasks.

	Strongly Disagree (-1)	Disagree (-0.5)	Neutral (0)	Agree (0.5)	Strongly Agree (1)
k. I can identify the core research question in a political science paper and understand its broader relevance.	☐	☐	☐	☐	☐
l. I understand what makes a good research question in political science.	☐	☐	☐	☐	☐
m. I can produce my own empirical research question on a topic of interest.	☐	☐	☐	☐	☐
n. I can easily identify the main concepts in a political science research paper I have read.	☐	☐	☐	☐	☐
o. I can define a concept and suitable measures for my research papers in the future.	☐	☐	☐	☐	☐
p. I can evaluate whether a scholar has a presented a causal argument, or one based only on correlation.	☐	☐	☐	☐	☐
q. I can explain the causal argument of a paper verbally	☐	☐	☐	☐	☐
r. I can explain the causal argument of a paper in writing	☐	☐	☐	☐	☐
s. I can identify the basic menu of research design options (e.g., large-n statistical vs. small-n case study) and explain the benefits and tradeoffs of each.	☐	☐	☐	☐	☐
t. I understand why using an appropriate case selection strategy for a given research question can improve internal and/or external validity.	☐	☐	☐	☐	☐

Open-Ended Questions

1. Did the tutorial activities help you understand the material's relevance to political science research? If so, how?

2. Which component of the course (e.g., lectures, assignments, and activities) do you think was most helpful in making the material applicable to your future studies? Why

Additional Active Learning Activities

Empirical vs. Normative Political Science

Even after an introductory course, many students cannot intelligently discuss whether political science is a "science." The distinction between empirical and normative arguments is an important entry point into this discussion. Generally, students are more familiar with value-driven arguments (e.g., democracy is "good" or "bad") rather than those based on empirical research (e.g., GDP is a strong predictor of a country's democratic status). To initiate the activity, I divide the class into small groups, provide a list of arguments, and ask them to assess whether they are empirical or normative:

   a. Autocracies commit fewer resources to environmental initiatives than democracies.
   b. Democracy is the most meaningful form of government.
   c. Women are underrepresented in the national legislatures of liberal democracies.
   d. An ethnically diverse public service is good for democracies.

As the group discussions begin, I caution students that the distinction between normative and empirical political science is rarely stark. Therefore, a one-sentence argument does not necessarily provide sufficient information to categorize a question as normative or empirical. After allowing the students to work on their answers, I ask each group to offer and explain their answer for one argument to the class. I urge students to consider how the hypothetical scholar may have reached their conclusion. This has prompted students to discuss the basic steps in the research process – which, at this point, they only have a passing knowledge of – such as conceptualization, data collection, and analysis. By the end of the debriefing, students firmly grasp that the research process informs whether an argument falls on the empirical or normative end of the spectrum. During this activity, I have noted that students often disagree on the "correct" answer, and through discussion, they realize that each can be correct. For example, some students contend that argument (d) must have been reached through normative reasoning about whether representation is constitutive of a "good" democracy. Other students argue that a "good" democracy can be defined by "objective" measures such as the number of political parties, the percentage of the population able to vote etc. To end the debriefing session, I encourage students to consider how normative and empirical political science build upon one another to contribute to our knowledge of the political world.

Concepts and Measures

I begin the lecture material with examples of common political science concepts that range from concrete to abstract; for example, 'voter turnout' versus 'democracy.' Then, I discuss the vastly different conceptual definitions and measurement techniques used in the democracy literature, highlighting to students the influence of the researcher's epistemology and research objective (e.g., Sklar 1987; Vanhanen 2000).

The core learning goal of this exercise is to familiarize students with the basic steps of conceptualization and how epistemology influences the decisions within that process. It is also meant to help students grasp the difference between inductive and deductive approaches to concept-building. Finally, it allows students to understand how to choose between interval,

nominal, and ordinal-level variables for a particular research goal. First, I provide an example descriptive research question: are students less 'enthusiastic' about POL 200 than their other political science courses? Next, I ask students to form small groups and conceptualize student enthusiasm for two research scenarios. The first context involves surveying 5,000 political science students nationwide as the primary data source. In the second, the data points are thirteen students selected to vary in age, gender, socioeconomic status, and previous academic achievement. For the most part, groups intuitively decide upon a survey instrument that employs an ordinal scale (e.g., 1-5) to measure enthusiasm for the first scenario and an inductive qualitative approach for the second. I then introduce the concepts of reliability and validity, explaining that different means of conceptualization have specific benefits and trade-offs (e.g., portability, generalizability, accuracy, and depth). Finally, I ask the groups to revisit their original answers and evaluate which approach would provide more portability/generalizability and accuracy/depth.

Choosing a Research Design

My lecture begins by distinguishing between variable and case-oriented approaches to research design. Students appreciate Howard's straightforward explanation: "this distinction is about analytical breadth versus depth: knowing a few things about many cases, or knowing many things about a few cases" (2017, 98). I then ask students whether a standard quantitative technique, such as regression analysis, is more likely to yield information about many cases or a few. Students generally have little trouble concluding that statistical methods are better at producing analytical breadth, which illuminates the complementary point that qualitative analysis is better for depth. The learning goal for this exercise is to familiarize students with both approaches' pros and cons so they can understand why a scholar chooses one or the other (or both).

Assignment #1 is an 'Article Analysis' (see Table A.1) that requires students to dissect the methodological underpinnings of a published qualitative empirical research paper. I regularly assign John D'Attoma's *Divided Nation*, which implements a historical institutional framework to explain the variation in tax compliance in Northern and Southern Italy. It is an excellent example of a comparative case-oriented approach. Once I have returned the assignment to students, I debrief them on the answers and ask them to discuss the following questions in small groups:

a. Did D'Attoma (2017) begin his research with a case-oriented or variable-oriented approach? Discuss the reasons for your answer.
b. If you were to build upon D'Attoma's findings, how might you take a variable-oriented approach?

Observing the group discussions, I have noted that this activity helps students understand that a research design shapes the type of answer one can expect to yield with research. Students also recognize through the discussion that the kind of answer they seek (i.e., broad or deep) is an essential initial consideration when starting a research project.

Practicing Content and Discourse Analysis

In preparation for the third assignment, I lecture on textual analysis, explaining the differences between content and discourse analysis. The typical content analysis focuses on manifest content, which involves "counting" or measuring text systematically to create data amenable to statistical analysis. Content analysis requires precise operationalization of the variables relevant to the project's hypotheses. For example, suppose the objective is to measure whether party leaders are "pro-environment" in their official speeches. In that case, a viable measurement strategy is to pre-determine a list of words and phrases associated with environmentalism and compute the number of times any of these passages are mentioned in the data. On the other hand, discourse analysis focuses more on latent content that requires interpretation by a researcher with deep knowledge of the relevant context. In contrast to content analysis, practitioners of discourse analysis tend to define their concepts inductively, which renders them more specific to the task at hand rather than directly applicable to comparable cases.

The learning goal for this exercise is to have students appreciate the differences between content and discourse analysis so they can choose the appropriate technique for a given research question. I adapted this exercise from Fisher and Justwan (2018), who developed it for quantitative content analysis. They emphasize the concept of intercoder reliability, using the activity to demonstrate to students that different coding rules can result in significant differences in empirical research (Fisher and Justwan 2018, 69). In small groups, I ask students to "measure" whether Liz Lemon or Jack Donaghy has a more *assertive personality* in the episode "Funcooker" of the TV show 30 Rock. First, I instruct them to prepare for a quantitative content analysis, which entails defining the concept, identifying relevant dimensions, and setting out measures for each dimension. Then, we watch the episode, and students apply their framework. After they finish the quantitative coding, I ask each group to discuss how well their framework met the original research objective. Having recently heard the lecture on discourse analysis, many students are critical of the results from the content analysis. For example, several students have observed that their group's coding scheme ignores the gender dynamics in the relationship between Liz and Jack. Therefore, a discourse analysis might be better suited to the research task. From there, I ask students to reconvene with their group to develop a political science research question – ideally using a topic from another course – and discuss whether it is more suitable for content or discourse analysis. During the debriefing session, the groups offer their questions for the whole class to talk through.

References

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Fisher, Sarah, and Florian Justwan. 2018. "Scaffolding Assignments and Activities for Undergraduate Research Methods." *Journal of Political Science Education* 14(1): 63–71.

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Sklar, Richard. 1987. "Developmental Democracy." *Comparative Studies in Society and History* 29(4): 686–714.

Vanhanen, Tatu. 2000. "A New Dataset for Measuring Democracy, 1810-1998." 37(2): 251–65.