Empirical Lab Exercises for American Government: A Data Adventure with Students

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<u>Proposal</u>

Including empirical analysis is important for students in the introductory political science classroom. The next generation of civic leaders needs to be able to utilize government statistics and policy reports as they engage in politics. The Introduction to American Politics curriculum can be expanded to include having students build evidence based arguments themselves.

A collection of empirical exercises that were initially developed for graduate statistics courses and upper division policy evaluation courses were adapted for the freshman course. This paper will outline the steps involved in developing an exercise that is interesting and challenging for first year students, without pushing beyond their capabilities.

Each exercise includes a short reading that supplements the required textbook chapter, plus information from an official government source. Sometimes that source is the Census Bureau, or the National Archives, the House of Representatives, the Senate, the White House, or a national or state agency. The students do some reading, collect some data, and then craft an essay with the information.

The project began with a group of honors students and a single exercise that utilized historical statistics from the census bureau, and short biographical sketches from the national archives. The honors students asked a lot of questions, and it was easy to improve the instructions for the exercise based on their questions in class. Moving the assignment to the general classroom population, and a larger class size meant that the student questions dried up, and revisions to the instructions had to come from the typical errors in the essays.

Further exercises were developed over the next several years, whether analysis of a subcommittee of Congress, or analysis of civil rights activists from the early 1800s and the mid twentieth century. A fourth exercise was built on popular music, and asked students to select a piece of music with political content. This assignment has been particularly effective in engaging a wide range of students, and not necessarily those who had the highest scores on the midterm exams. I am asking them to write about something that they care about, and then apply that knowledge to politics.

The project was stuck because of limitations in grading, not due to the range of topics that could be developed. A new electronic platform is currently facilitating an increase in the number of lab exercises that can be assigned in a single semester. The software allows student to answer questions as they are collecting data on a weekly basis, and then select an essay topic every three weeks. There is now time in the semester for three additional lab exercises.

This format allows me to present politics as an active learning module, instead of a passive recitation of facts. Citizenship involves monitoring events, with occasional moments of active participation. Sometimes action is required at the local level with a school board or county commission decision, or at the state or federal level. Crafting an argument is a key skill for influencing policy making. A combination of data analysis tasks plus an electronic delivery platform allows me to engage students in active learning at the novice level.

Abstract

The isolated college educated policy expert who would exist in a world devoid of reference books is a relic of the turn of the 20th century. My students have smart phones, Wikipedia, and news feeds. They will not be isolated from information. The pedagogical problem is different now. I do not need to test how much a student can read and retain. I need to test how a student can sift through information to find the elements that are needed for the present purpose, which is to produce a convincing rational argument supported with information.

Including empirical analysis is important for students in the introductory political science classroom. The next generation of civic leaders needs to be able to utilize government statistics and policy reports as they engage in politics. The Introduction to American Politics curriculum can be expanded to include having students build evidence based arguments themselves.

Introduction

Introduction to American Government is a course that brings undergraduate students together in aggregate sections. Most semesters the only thing the students in the course have in common is this single class in their schedule. Yet we must cover some of the most controversial topics in society, and almost all of us were told as children by people whom we respect never to talk about politics in public.

While I was a graduate student I began hearing from my friends in the physical and medical sciences what a waste of time the course they took as undergraduates was for them. I continued to hear this complaint from many acquaintances at dinner parties over the years. But then I didn't have a dog in that fight, since my service teaching assignment was statistics. Divulging that fact in a social gathering brings an entirely different set of recollections, many of which are much more negative than the simple recall of time being wasted.

So I blithely ignored the pedagogical quandary provided by the Intro American Government class while I was teaching statistics to PhD students, then to MPA students and undergraduates. The good news is that during the fifteen years I was teaching statistics, technology was making an every expanding variety of data available to students which increased the complexity of the empirical questions that could be addressed in a single semester of statistics for political science.

I asked my department chair at that time for a break from the stats course, knowing full well that would mean teaching a course that I had not thought much about since my first year of teaching. The template I had in mind was a social studies class I took as a high school freshman in Pleasant Hill, California. We had a series of modules that allowed us to manipulate information in order to draw our own conclusions about public policy issues in the news in 1970. There was a broad cross section of controversial topics, but Mr. Peters guided us through them with an emphasis on learning to talk to each other. We were students in the new high school which had fifteen feeder elementary schools, with parents who ranged from steel workers to aeronautical engineers. There were any numbers of cleavage points among my classmates, and conflicts were frequent. This was a time when adults left kids to settle their

own problems, and only intervened when there was danger of escalation to the point of serious bodily harm. For me and my classmates, learning to talk through problems instead of throwing punches or walking away was not easy, but the skill got stronger with practice over the course of the school year.

I wanted to give my students that same chance to practice talking about difficult topics, as well as giving them a chance to practice their writing, while at the same time I wanted them to be exposed to what political scientists actually do in the 21st century. My template for this was the mineralogy and petrology lab courses that I had taken as a first year graduate student. Geologists have only 36 credit hours to produce a professional geologist. They begin in the first courses that majors take. The same happens in chemistry, which I took as a third year graduate student with 500 pre-med majors. My physical science friends were right that the political science class in comparison to these introductory classes was not challenging. I had been trying to find ways of challenging students in statistics without discouraging them, or giving them a false sense of how difficult a topic is. I began viewing Intro American Government through that same lens. How to challenge without squashing students.

But wait, many readers will say at this point. Intro American Government is not for majors. Exactly, it is required of a much more important group of students, future voters. We cannot afford to have a significant proportion of our citizenry think that politics is a waste of time, or not for them. This is not a new problem, and I was influenced by C.P. Snow's approach in the Two Cultures first delivered in the 1959 Rede Lectures (reprint, 1998).

Initially I had in mind a weekly lab exercise to accompany each chapter in the American Government textbook. I had three semesters with honors students in a 20-30 seat section to develop the initial concept. Very quickly I realized that my plan for fourteen exercises was overly ambitious, even unrealistic, but that the students really enjoyed the challenge of working with political data. I moved into the general classroom with three empirical exercises. One was qualitative, one quantitative, and one required a mixed methodology. This second phase of the project, as I developed exercises that worked for a general Introduction to American Government classroom is what I will report on today.

Student Pushback

Honors students took my two pages of instructions, and asked lots of questions in class for the next two weeks until their assignment was done. General population students took the questions and became oddly silent. Slowly, students came to me alone and asked their questions. I began opening the next class with a summary of the questions I had received since the previous class meeting. I made adjustments during the semester as I understood what obstacles existed for students.

Lab sections encourage students to ask questions since there is an instructor moving through the classroom while students are working at their own pace. Students quickly realize that it is prudent to work independently before class, and use the lab time for the questions at the point where you got bogged down. Standing in front of the lecture hall and asking

questions does not replicate the spontaneity of questions that emerge from students in the work room context of a lab. The layout of the room, and the schedule of lectures in the traditional lecture format are not conducive to interactive learning. But there is only so much that can be done given legacy decisions about where and when particular classes are offered on any campus.

Based on feedback from students, my assignment instructions grew to four pages single spaced. Each semester students recommend that I provide more instructions. This makes no sense to me. Students will tell you that they don't like to read, but yet they want the assignment to be longer, meaning they have more to read. I am tempted to develop some survey research questions around what seems to me to be a paradox. Why do they say that they don't like to read, yet at the same time they want there to be more instructions?

Students complained that they could not get feedback quickly enough. I got bogged down in providing feedback for essays, especially after I moved to electronic submissions. It felt like learning to grade all over again, and I was SLOW… But then technology emerged to provide assistance in unexpected ways.

Modifying the Political Science Classroom

The flipped classroom was the new trending innovation while I was developing this approach to Intro American Government. I attended a few workshops, and talked with some colleagues in other departments who were enthusiastic about using the approach. I couldn't figure out how to make it work for me. But the discussions were helpful in helping me isolate what was working and what still needed improvement with my lab exercises.

I don't want to lose the feel of a college lecture classroom. Each time I've turned the lecture hall room into an open lab, the room starts feeling like high school. There are a few people who are physically in the room, but they don't want to work on the assignment. Their lack of focus permeates the room in ways that continue to amaze me. While I want to say, "just leave if you aren't working", I do not. Instead I walk over and ask if they have any questions. Surprisingly, they almost always say yes. What would be best is to be able to break the class into recitation sections, and to meet one day a week in smaller groups. That is not available at yet at my campus.

I opted instead for extended office hours. I reserve a computer lab, or a conference room for two hours. I announce where and when I will be there, and I invite students to drop in alone or in small groups for hands-on help with their assignments. Sometimes three or four students drop in at the same time. The sessions are always better when there are more students there together. The scheduling works best if I send around sign-up sheets 24 hours before the session. I'm trying to find a scheduling app that will be easy for me to use, and convenient for the students. I will be experimenting with Google Appointlet this semester. The first day was encouraging. I expect there will be more to report by the end of the semester. When I can send an email reminder that the session has begun, I get better attendance, particularly for evening sessions.

Nearly all of my students like to learn how to do something new. However, none of them wants to look foolish while they are learning. Coincidentally, I began taking adult ballet about the time this project really began taking off. Suddenly I was learning how to do something that I had never done before, and I began to understand some of the reactions that

students were having to the lab exercises. Learning new things makes human beings very clumsy. Babies who have been little chatter boxes while they are crawling forget how to speak while they concentrate on learning to walk upright. As college instructors we tend to forget this fact about human beings. I am convinced that some of the negative reaction to quantitative research is that smart people must look foolish to learn how to do use new tools.

The Sweet Spot

Through complete serendipity, after teaching a section of 250 students with a T.A., and then settling on 90 students as the size I could manage single handed, I had a late afternoon section that was tiny, just 15 students. In that group of students was a graduating music major. Each of the four exercises I gave her were easy, while the other students struggled. The group dynamics were excellent though, so it was easy to ask what was causing the trouble. This is when I had the epiphany about the difference between college seniors and first year college students. The seniors are very good at juggling an array of complex tasks while the first year people are struggling to remember when and where they are supposed to be.

The Order of Assignments

I began putting what would be the most complex exercise at the beginning of the semester. I make the instructions available to students Friday of the second week of class, and their essay is due two weeks later. I tell students this allows me to assess the range of skill levels in the room, which is true. But I am also giving them an assignment that is easy for a

senior to execute the required elements at an A or B level, and nearly impossible for a first year student to do the same. I critique the students as I would a graduate student, bringing their attention to the wide variety of problems inherent in their argument, or their grammar. If a student stumbles badly, I do not give a grade lower than a C. Instead, I mark the paper "NG" or no grade. I explain that the work is not yet college level, and that I cannot evaluate it in its current state. The students may take as long as they need to revise the essay, although I encourage them to complete the revisions before the next assignment is due.   I have yet to find a student who is not capable of producing a college level essay when left to their own timetable. Sometimes the student just needs extra time. Sometimes the student needs comments about a draft of their work.

This first lab is also a numbers lab. Students examine population counts from the initial federal census taken in 1790, as well as the earliest colonial census for the three states they choose. In addition, the students examine brief biographies of the signers of the U.S. Constitution from the states they select. The essay must include a description of the population trend in the colonial period as well as the nature of the representatives who gave us the structure of government described in the U.S. Constitution. The engineering students are particularly engaged for this assignment.

The second lab shifts to a more complex political issue, that of civil rights, but the information the students must analyze is an information format they are all familiar with, biographies. Students compare a current civil rights issue of their choosing to events that occurred in 1832 and in 1942.

The third lab returns to numbers, asking students to analyze a subcommittee of Congress. I select a standing committee of the U.S. Congress. Some semesters this is a House committee, and in others it is a Senate committee. I change the committee every semester, which minimizes the temptation to recycle an assignment that an acquaintance turned in last semester. The students then select the specific subcommittee they will analyze, which is usually a choice between five or six subcommittees, most of which have 15 to 20 members. The choice of committee and chamber (House or Senate) is made with some attention to whichever policy issue is in the news cycle, or is something that the graduate seminar is analyzing. The output for this exercise is a letter to a policy maker, and this assignment is used for department assessment purposes. Students collect five variables for their subcommittee membership: Congress, political party, state, district, year of first service, and note any leadership posts held if any. The students also examine hearings data, and congressional committee websites for policy information. Students may write as themselves, or take on a role play or a lobbyist. The letters are generally quite good.

The final lab exercise has been the most successful. This exercise throws the choice of policy issue completely back to students. The restriction to their choice is that the policy issue must be expressed through an aspect of popular culture, most frequently a piece of music. Students frequently tell me that this was the easiest assignment of the semester. It is always the highest quality writing of the semester. Everyone in the class has their highest grade for the semester in this assignment, with even the C- and D students managing a B. Part of that is by design. There is only one thing that students must write about in this essay, and it is something that they know a lot about – a piece of music that has a political message. They must also

illustrate how their musical selection relates to the public policy process. I am particularly impressed with the number of young men who sit in lecture seemingly disinterested, who become very animated with the subject of this essay. They visit my office hours, and tell me a lot about the decision process they followed in selecting between several different songs, and policy issues important to their home communities.

Replicating the Experience

Last spring I signed a contract for an e-book that would be hosted on the TopHatMonacle Corp. platform (McCurdy, 2019). A review copy of the manuscript is available, following instructions in the Bibliography. At that point I had been using TopHat in my classroom for a year, and was fairly pleased with the interactive aspects of the platform that were possible in lectures. I had been pitching my lab manual idea to different traditional publishers, without much luck. At that point, I was still thinking about a traditional book. CQ Press passed twice, even though my book reps kept pushing the idea to their colleagues on the manuscript development side of the business. Perhaps the book reps were being complimentary because they didn't want to lose my business for the textbook that I had been using for several years now.

Last summer I returned to the original idea that I began with, a set of lab exercises that could be assigned each week to accompany chapters in any American Government textbook. I planned nine chapters. To that point, I had never been able to assign and grade more than five

lab exercises. But I began entertaining the idea that someone else using my textbook would pick and choose among the labs, depending on their interests.

Last fall I beta tested the e-book, under some of the most miserable field conditions I can imagine. The students were fantastic, but circumstances threw up some difficult obstacles. First, late Friday night after the first week of classes, I got word that my father had died. He had lived a long, full life, and we had talked about the book a little during what would be our last visit. As his life was contracting, my college age daughter's life was expanding, and my professional life was reaching a new plateau. Any one of those changes in demographic circumstances would have been quite enough to worry about I think. I hope I juggled them appropriately. I missed a week of class for the funeral.

I got back to south Georgia in time for the university to close for a week. For the third year in a row, classes have been disrupted by a hurricane making landfall near enough to the university that we closed, so that students, faculty, and staff could make hurricane preparations. Some of us were under mandatory evacuation orders, although not my neighborhood. I did put up plywood over the French doors this year.

So my beta test semester began with two weeks of classes cancelled. It was a boon in one way. I let go of the last security blanket from my student days, the blue book midterm exam. I had convinced myself that I needed this in-class, timed test to be able to sort the students who were prepared and slumming from those who were unprepared. With the midterm, I would need to drop one of the lab assignments from the book. Instead, I decided that the in-class, timed exam was an artifact of a different professional life we were training students to assume. The isolated college educated policy expert who would become a county

agent, a principal, or a city manager, and would exist in a world devoid of reference books is a relic of the turn of the 20th century. My students have smart phones, Wikipedia, and news feeds. They will not be isolated from information. The pedagogical problem is different now. I do not need to test how much a student can read and retain. I need to test how a student can sift through information to find the elements that are needed for the present purpose, which is to produce a convincing rational argument supported with information.

The Flip

I am not flipping my classroom. Instead, I am flipping the skills that students acquire, and demonstrate their proficiency with during the semester. I want them to build a classic essay. Instead of letting them loose to find whatever information they can use as evidence, I constrain their information. I tell them which information to use. The model I am using is of the engineering competition. Engineering student receive a box of apparently random parts. Their job is to construct a device that will serve a particular purpose. Different teams with the same parts and design will create very different looking and behaving solutions. It strikes me that this is exactly what democracy requires of society. Using the same information, we will reach a different consensus depending on which elements of the evidence we highlight. And then the difficult work begins, to build a consensus by convincing our friends and neighbors of which issues are most important to address first.

The Results

A guided essay is possible with the TopHat platform in a way that I could never constrain before. While I have instructions in the same order, students do not necessarily begin where I suggest. When there are questions to answer for a grade in an interactive textbook, the students respond. The group last fall responded in ways that were beyond my expectations. I will see next week if they are outliers. The first essay this spring is due the week after our conference.

All four of the essays that students submitted for a grade last fall were more noticeably better than in previous semesters. They were able to present their evidence in a more convincing manner. The students were instructed to use the answers they just provided inside the question boxes in TopHat to write a classic essay. There was only one "no grade" out of 84 on the first assignment, when there are more typically ten, and sometimes even more.

At this point I am pleased with the way that students made the transition from our campus classroom management software, which is now used in the high school face-to-face as well as on-line classes. We have the startup issues that remind me of the questions students had at the beginning of the semester with the old statistics software that ran on a mainframe computer. Once our phones and laptops are synched, the students did not seem to have further trouble with assignments in TopHat.

The Future Plans

This semester I am experimenting with greater choices for students. I want my students to be exposed to a variety of public data sources such as: house.gov; senate.gov; whitehouse.gov; supremecourt.gov; archives.gov, and others. I want them to recognize the availability of public information that is provided through tax payments and our collective choices. I want students to gain experience asking for assistance from government officials, and to build a vocabulary suitable for discussing politics with a group of people from multiple generations.

Each of the lab exercises practices one of these skills. Over the course of a semester my students will examine information on eight different topics, selecting from them to write three classical essays. The final exam is a fourth essay, which all students answer. The lab manual chapters are answered weekly, with the four essays spread evenly through the semester, coming about every three weeks.

I hope to expand this format into the distance learning context. We have synchronous classrooms with students meeting in different physical locations. I taught statistics in this environment for MPA students 25 years ago. I am looking forward to seeing what adjustments need to be made for the Intro American Government students, most of whom will be first term college students.

Bibliography

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The Demonstration Module can be accessed at https://app.tophat.com/e/332356 Choose to enter as "Anonymous Guest Access", then Choose "Assigned" to see the Table of Contents file as well as the nine chapter files in the e-text. Your view will be as a student.