

# Teaching Statement

Jeffrey J. Harden\*

## 1 Teaching Philosophy

My top priority in teaching is to help students develop the skills to synthesize and communicate ideas while taking ownership of their education. It is my responsibility to present topics and concepts clearly, and to challenge students to comprehend beyond basic facts. Once the material has been presented, I expect students to take the initiative to understand it fully. At times students might not fully grasp a concept or idea. They may make unwarranted assumptions or claims not supported by scientific investigation. These mistakes can be corrected and used as a step in the learning process. The key is getting the students to take risks by using class material to put their own ideas on the line, subject to falsification. Implementing this philosophy requires three primary objectives in all of my classes: an understanding of current knowledge from academic literature, the development of critical thinking skills, and the ability to write analytically.

I use relevant academic literature to supplement textbook and lecture material. Though it can be new and challenging to many undergraduates unaccustomed to scholarly research, it exposes them to sophisticated and rigorous discussion of key topics. If done in a manner that does not require too much specialized knowledge, this practice helps them break out of the pattern of analyzing politics solely through their own anecdotal evidence. By forcing them to think critically about research that makes generalizations from a sample of data to a population, my approach helps students gain perspective on their own experiences. It also naturally integrates important social science concepts such as measurement and causal inference into class discussions about the political world.

The development of critical thinking skills is another primary objective in any class I teach. I expect students to relate core principles from the material to contemporary political issues. For example, as a teaching assistant in an introductory American government course, I use information from lecture and class discussions on the definition of democratic representation to shed light on the redistricting process in the United States. We examine several approaches to redistricting, then consider which type gets closest to the ideals of representation and who benefits and suffers from each one. Similarly, I ask students to apply lecture material on political participation to empirical research on voter turnout. In each case, my goal is to help students evaluate the extent to which the theoretical constructs they learned in class apply in the political world. Often they are quick to find cases where theory and practice do not match. From this point, I ask them to consider whether that means theory should be reevaluated, and how they might go about doing so empirically. By forcing them to struggle with theory and evidence in this way, I show them that critical thinking is more than just identifying something as “wrong,” but also being able to give justification for why it is wrong and suggestions for solutions.

Finally, I place a strong emphasis on helping students become better writers. Both introductory undergraduate courses and graduate seminars should be writing-intensive, with students completing short critiques and reflections as well as larger written work. As a teaching assistant I assign writing responses on the week’s readings and use them to begin class discussions. I plan to continue using this technique in the future, and also to require students to develop a more comprehensive argument in a term or seminar paper. For an undergraduate course, one assignment I plan to use is an analysis of four or five articles connected by a common theme (e.g., voter turnout or negative campaign advertising). Students will evaluate the claims made

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\*Ph.D Candidate, Department of Political Science, University of North Carolina at Chapel Hill, 312 Hamilton Hall, CB #3265, Chapel Hill, NC 27599, 919.600.9247, jjharden@unc.edu, <http://jjharden.web.unc.edu/>.

in each article, come to their own conclusion as to which one makes the strongest argument, defend that conclusion, and include supporting evidence from the articles. Once completed, it is then my responsibility to provide thorough feedback targeting their ability to support an argument and their writing styles.

Learning is not just the power to remember facts, but the awareness to take a lesson taught in one context and apply it to another. As a teacher, my goal is to help students identify patterns that are common across lessons, and even across courses. This can be done through an emphasis on the current state of knowledge in political science and the ability to think critically and communicate those thoughts clearly. When these goals are achieved, students leave my courses with an improved capacity to assess the political world around them, and are better able to think critically about any topic that is relevant to them in the future.

### **1.1 Teaching Philosophy and Instruction in Quantitative Methodology**

While my core outlook on teaching—giving students the skills to think and create on their own—guides me in any class, the nature of methods instruction requires a slightly different set of priorities. The cumulative aspect of mathematics necessitates that concepts, algorithms, and assumptions be clearly understood early on to prevent students from getting lost and overwhelmed. Thus, I aim to keep careful control over students' work in methods courses, especially at the beginning. I also strive to repeat key lessons in different ways to increase the chance of retention. For example, to illustrate the assumptions of ordinary least squares, I first show students the analytic expressions, then show them graphical output from simulations with violations to those assumptions. Finally, a homework assignment requires them to simulate data that violates a different assumption and graphically display the consequences for the estimator. This approach reinforces the key concepts rather than just giving students a vague sense of the method's objective. I emphasize hands-on experience in methods courses at both the graduate and undergraduate levels. This includes frequent assignments, and larger papers or projects centered on applying skills from class to substantive questions.

Overall, as a methods instructor I aim to help students understand the intuition behind statistical concepts while still pushing them to move beyond simply knowing what to type into computer software. My goal is for students to leave my classes with (1) an understanding of how to use the tools I taught in their own substantive work, and (2) a strong enough methodological foundation to understand from first principles any method that appears in social science research over the course of their careers.

## **2 Teaching Interests**

Depending on the needs of the department at School Name, I am prepared to teach undergraduate level research methods courses, as well as courses on American government, state and local politics, campaigns and elections, public opinion, and political behavior. At the graduate level, I am interested in teaching in a methods sequence, including courses in probability theory, linear models, and generalized linear models and maximum likelihood. Furthermore, I could offer specialized graduate courses on Monte Carlo simulation and resampling methods, Bayesian statistics, time series analysis, and scope and methods/research design. I would also like to teach graduate seminars on state and local politics, campaigns and elections, public opinion, and macro politics.

## **3 Overview of Teaching Experience**

As detailed below, my teaching experience and interests cover both methods and American politics. Additionally, I completed the UNC political science department's semester-long course "Teaching in Political Science." That course gave me an in-depth look at pedagogical theory and best practices in college-level teaching. Also, while taking that course I designed an introductory undergraduate class in American government, including the creation of a syllabus, writing assignments, and outlines of lecture notes.

In methods, I have taught short courses to faculty and students on the statistical environment R and typesetting system L<sup>A</sup>T<sub>E</sub>X at UNC's Odum Institute for Research in Social Science every semester since Spring 2010. These courses—which I designed and teach on my own—involve approximately five hours of instruction and take beginning students through most of the learning curve of each program. For example, in the R course someone with no prior experience comes away with the ability to estimate multivariate models, graph results, and use simulation techniques, among other skills.

Additionally, I served as the teaching assistant to a graduate-level methods course on linear models. In that course I lead the weekly computer lab session, which was the equivalent of teaching a one credit-hour course on my own. I lectured to the class each week, including applying theory from the main lecture to real data and serving as the primary instructor of specialized material such as Monte Carlo simulation, posterior sampling, and resampling methods. In general, my job was to provide first year graduate students with a foundational knowledge of how to use quantitative social scientists' primary tools. From these experiences I am prepared to teach undergraduate research methods as well as graduate-level courses on probability theory, linear models, generalized linear models and maximum likelihood, Bayesian statistics, time series analysis, and scope and methods/research design.

Finally, in June 2011, I co-taught (with Tom Carsey) a week-long course titled “Monte Carlo Simulation and Resampling Methods for Social Scientists” through the Interuniversity Consortium for Political and Social Research (ICPSR). That course covered the theory and practice behind (1) simulation as a means of evaluating statistical models and competing estimators, as a teaching tool, and as method for understanding substantive questions, and (2) resampling methods like bootstrapping and jackknifing. The main theme of the course was that the use of simulation and resampling to mimic the process of repeated samples provides researchers with considerable leverage in assessing their statistical models and in evaluating substantive theory. The course met for 8 hours per day for five days. Tom taught theory in the mornings, and I taught practice and implementation in the afternoons. I could easily extend the material from this course to a semester-long graduate seminar on simulation and resampling methods.

I also have experience teaching in American politics. I served as a teaching assistant for undergraduate courses for three semesters. This experience includes twice leading three discussion sections of approximately 20 students each in an introductory American government course and one semester of leading discussion sections in a state and local politics course. In each case I was responsible for generating lesson plans to teach each week, leading class discussions of that material, giving weekly assignments, holding weekly office hours, and grading all course material. This experience taught me that providing quality instruction to students requires organization, flexibility, and a willingness to be available for help. From these experiences I am prepared to teach a wide range of undergraduate and graduate American politics courses.

## 4 Student Evaluations

Below I provide summary statistics and example comments from my evaluations as a lead instructor/co-instructor and as a teaching assistant (TA).

### 4.1 Summary Statistics

Course evaluations at the Odum Institute are measured by questions on a 1–4 scale, with higher scores corresponding to more positive evaluations. Table 1 reports mean scores across both my R and L<sup>A</sup>T<sub>E</sub>X courses for three semesters. Course evaluations at UNC are measured by several questions on a 1–5 scale, with higher meaning more positive evaluations. In Tables 2–4 I report the mean of scores given by my students for each question, as well as the political science department means during that semester. Note that in every instance my score was above the departmental mean, even when the departmental mean was quite high.

Table 1: Evaluation of Role as Lead Instructor  
for Short Courses on R and L<sup>A</sup>T<sub>E</sub>X (1–4 Scale)

How would you rate the . . .	Mean
overall quality of the course?	3.60
instructor’s knowledge of the subject matter?	3.81
instructor’s style of presentation?	3.60
course content/topics covered?	3.64
quality of visual aids?	3.79
relevance to your work or studies?	3.48
opportunities to get your questions answered?	3.81

*Note: All questions on a 1–4 scale with 1 = poor, 2 = fair, 3 = good, and 4 = excellent. Data taken from Spring 2010, Fall 2010, and Spring 2011. N = 42.*

Table 2: Evaluation of Role as a TA for a Graduate  
Methods Course on Linear Models (1–5 Scale)

Was the instructor. . .	Mean	Department Mean
a fair grader?	4.89	4.23
good at leading class discussion?	4.78	3.92
well prepared for class?	5.00	4.15
a master of the material?	4.89	3.80
available during office hours?	4.89	4.01
good at giving useful comments on papers?	4.33	3.90
overall excellent?	4.78	4.15

*Note: All questions on a 1–5 scale with 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, and 5 = strongly agree. Data taken from Spring 2010. N = 9.*

Table 3: Evaluation of Role as a TA for  
Introduction to Government in the United States (1–5 Scale)

Was the instructor. . .	Mean	Department Mean
a fair grader?	4.27	4.20
good at leading class discussion?	4.36	3.91
well prepared for class?	4.61	4.10
a master of the material?	4.51	3.79
available during office hours?	4.54	3.93
good at giving useful comments on papers?	4.03	3.86
overall excellent?	4.40	4.12

*Note: All questions on a 1–5 scale with 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, and 5 = strongly agree. Data taken from Fall 2009. N = 60.*

Table 4: Evaluation of Role as a TA  
for State and Local Politics (1–5 Scale)

Was the instructor. . .	Mean	Department Mean
a fair grader?	4.33	4.25
good at leading class discussion?	4.08	3.92
well prepared for class?	4.66	4.21
a master of the material?	4.48	3.84
available during office hours?	4.35	4.03
good at giving useful comments on papers?	4.06	4.02
overall excellent?	4.28	4.17

*Note: All questions on a 1–5 scale with 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, and 5 = strongly agree. Data taken from Spring 2009. N = 55.*

## 4.2 Example Comments

Course evaluations at UNC allow students to provide written feedback about the course and instructor. Throughout my time as an instructor I have received many suggestions from students that I will use to improve future classes. Below are a set of comments that reflect on my teaching successes to date.

### Box 1: Comments on Role as an R and $\LaTeX$ Short Course Instructor

- “Jeff did a great job introducing us to  $\LaTeX$ .”
- “Really clear presentation. Very useful!”
- “Thanks for the great introduction to R! I will definitely be using [the course material] in the future.”
- “I learned a lot. The instructor was very good!”
- “Great job, good presentation.”
- “Willing to answer questions.”
- “Having fully-commented code to look at was nice.”

### Box 2: Comments on Role as a Co-Instructor of an ICPSR Course

- “[Jeff was] terrific—very knowledgeable and accessible; clear.”
- “[Jeff was] fantastic and had great depth of knowledge of the material.”
- “[Jeff gave] clear explanations of concepts [and] used multiple examples to explain points. If you didn’t ‘get it’ the first time, you got more chances. [He] didn’t use too much jargon, making the material very accessible.”
- “I wish Jeff had been my instructor in graduate school!”
- “The lab sessions were very sophisticated.”
- “The course was superb. I ended up reading several books on R this summer and it all traces back to the short course. You provided a great foundation.”
- “I will be using [the course material] in a current project that I am working on.”

Box 3: Comments on Role as a TA to a Graduate Methods Course on Linear Models

- “The lab was excellent.”
- “Great mastery of the material; very helpful.”
- “Jeff did an outstanding job giving us a good sense of the intricacies of the material.”
- “Regularly available for help on homework.”
- “Jeff was an amazing TA; very helpful and knowledgeable.”

Box 4: Comments on Role as a TA to Undergraduate American Politics Courses

- “Jeff was helpful and knowledgeable. I enjoyed having recitation with him.”
- “Jeff did a great job!”
- “Very knowledgeable and helpful with the material.”
- “Took extra time to answer student questions and made class enjoyable.”