other groups, and also why some questions and hypotheses seemed more interesting to them. I have found that when students have to articulate what makes a question interesting, or what they might or might not learn from a given question, they are more likely to internalize the criteria for strong question and hypothesis generation.

A third exercise has been very effective in illustrating the concept of sampling distributions, and in showing the differences between populations and samples. Each student is asked to collect some information about a small number of members of the House of Representatives (e.g., the percentage of the vote they received in the last election, their partisan affiliation, the number of terms they served). Students enter the data and then, as a class, we first look at statistics from the individual samples, and later combine the data sets and look at statistics from the overall population (of sorts). We compare means from the overall samples to means from the individual student samples, and we also draw random samples of different sizes from the full set of House members and compute statistics from the different sized samples. With exercises such as this one, students are able to participate in what otherwise would exist for them only on a theoretical level, and they take a few steps beyond descriptive statistics toward inference.

Software and Texts

For most of the time I have taught the course, students have undertaken data analysis using *SPSS*. The students like it (as much as they like any statistical software) and *SPSS* allows them to engage in every form of analysis they learn about in the course.

I have not been that pleased with the books I have used to teach *QPA*. In fact, I seem to change the book almost every time I teach the course. (Indeed, I will be using a different book for the fifth time when I teach the course in the spring.) Overall, my dissatisfaction with these books stems from some combination of three things: an inappropriate balance between math and substance, a lack of political science examples, and an insufficient emphasis on research design. Knoke and Bohrnstedt's *Basic Social Statistics* was too math focused (and the version I used back in the mid-1990s was riddled with typographical errors, which students become impatient with quickly). Levin and Fox's *Elementary Statistics in Social Research* was a bit less math-focused than *Basic Social Statistics* and it has excellent and extensive examples of computations. However, the link to political science was not strong, and I wasn't all that interested in devoting time to having students compute statistics by hand. The next book I used was Champney's *Introduction to Quantitative Political Science*. In my opinion, despite its political science focus, its coverage was not extensive enough for a primary text. Most recently I used Sirkin's *Statistics for the Social Sciences, 2nd edition*. I liked its use of political science examples, and its balance between substance

and math in presenting statistical techniques. However, I decided not to use it again because of its limited coverage of research methods. Of course, I could use a supplementary text to handle that aspect of the course, but instead I have decided to try Johnson, Joslyn, and Reynolds' *Political Science Research Methods, 4th edition*. This decision results from the greater emphasis I am giving to research design while also dealing with statistical techniques.

Teaching Research Methods: The Best Job in the Department

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This paper is based on verbal remarks at the Roundtable on Teaching, Midwest Political Science Association, Chicago, April 19, 1996[1].

If any readers recognize my name, they are likely to place me in American politics (for co-authoring a leading textbook in the field[2]) or in comparative politics (for my studies of comparative political parties[3]). They are not likely to regard me as a methodologist.

Yet, over more than forty years of teaching at Northwestern University, I have primarily taught undergraduate and graduate courses in research methods: elementary and intermediate statistics, methods of data collection, content analysis techniques, assorted computer methods of analysis and information processing, logic of inquiry, and so on. I have done this mainly by personal choice, not departmental necessity.

In the spirit of David Letterman, I can cite seven top reasons why teaching research methods (including statistics) is the best job in a political science department:

7. You don't have to update your notes after every election.

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[1]Other roundtable participants discussed these topics: Lawrence Baum (Ohio State), "Teaching Large Classes"; William McLauchlan (Purdue), "Some Challenges and Opportunities of Distance Education in Political Science"; Jerry Goldman (Northwestern) "The Multimedia Lecture: From the Lunatic Fringe"; and Beth Henschen (Albion) "Preparing Future Faculty: Programs in Professional Socialization." The Roundtable was organized and chaired by Ed Sidlow (Eastern Michigan).

[2]Kenneth Janda, Jeffrey Berry, and Jerry Goldman, *The Challenge of Democracy: Government in America* (Boston: Houghton Mifflin, 2002).

[3]Kenneth Janda, "Comparative Political Parties: Research and Theory," in Ada W. Finifter (ed.), *Political Science: The State of the Discipline II*. Washington, D.C.: American Political Science Association, 1993. Pp. 163-191.

6. Grading is easier (there are right and wrong answers); there is more variation in scores; students who score poorly are humbler.

5. You don't have to instill fear of failing into students; they come equipped with the fear.

4. You almost always know more than the students (no worry about political junkies).

3. Students frequently enjoy learning how to do research (imagine that!).

2. Whatever students learn, they learn in your class–so teaching is immediately rewarding.

1. Undergraduate political science majors can actually get jobs after graduation because of what they learned in political science classes.

Concerning the last (top) reason, I could cite names of graduates employed by advertising agencies; both major political parties; consulting firms; governmental agencies at the national, state, and local levels; and even business firms–such as Lands' End, Sara Lee, Sears, etc.– mainly on offering knowledge of computer methods of statistical analysis.

Based on my four decades of experience[4] —from mainframes to microcomputers—with teaching research methods, I can offer some general principles for teaching these topics:

a. Do not separate methods from substance; always link research techniques to substantive political topics. (Which means always teach methods *within* the department— despite what the Dean and your colleagues may think.[5])

b. If you teach statistics, use computer programs for the analysis of real data sets, such as the American National Election Studies or United Nations data on countries.

c. If you teach statistics, don't just have a midterm exam, but have more frequent exams to make sure that students don't fall behind.

[4]Almost four decades ago, I published *Data Processing: Applications to Political Research* (Evanston: Northwestern University Press, 1965), which was issued in a second edition in 1969. As for techniques involving qualitative analysis, see *Information Retrieval: Application in Political Science* (Indianapolis: Bobbs-Merrill, 1968).

[5]In 1964, as an untenured Assistant Professor, I proposed teaching our own statistics course in the political science department. My written proposal was approved by the college curriculum committee but opposed by the Dean, who want to "consolidate" teaching statistics for all the social sciences in one large class. (Already psychology and sociology had their own statistics courses. If political science put its own course on the books, where would this wasteful proliferation of courses end?–argued the Dean) The issue reached the floor of the College of Arts and Sciences faculty meeting, at which the Dean stepped down from the Chair and argued against my proposal from the floor. My response, in part, was that teaching should never separate method from substance. I won on the vote by show of hands. He promoted me anyway.

d. If you teach statistics, teach descriptive statistics (including simple correlation and regression) before inferential statistics, which involves more abstract notions of probability.

e. Regardless of which methods you teach (statistics, content analysis, data collection), require that students actually *do* research and write papers reporting their efforts; I ask only for five pages of text–and as many tables or figures as necessary.

f. Because few students will have written such papers before, provide them with an explicit format to follow; I use these headings for a 20-point paper:

1. Statement of the Problem (worth 3 points)

2. Research Design and Hypotheses (worth 7 points)

3. Data Analysis (worth 10 points)

4. Summary and Conclusion (worth 5 points)

g. Tell students that their papers should be organized explicitly according to these headings for they will be *graded* accordingly.

h. In an accompanying two or three page statement, tell students what you expect under each heading and provide them with sample formats for tables, citations, etc.

i. Tell them that conducting an empirical study is like building a violin; the first product is always poor, but you learn much in the process.

This last point captures the essence of the process of teaching research methods. The objective is to have the student learn methods by applying them. To cite another metaphor, it's like teaching students in a classroom how to swim. All the instruction about moving the arms and turning the head to breathe will help little unless they try it in the water.

Teaching Undergraduate Methods: Overcoming "Stat" Anxiety

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By now, the undergraduate methods course has become a standard part of the political science major for most political science departments in US universities. But most political scientists do not like to teach the course. They may have feared the old "scope and method" notion for this course, with its review of leading theoretical paradigms and its going over of different study approaches. But the "scope and method" format is pretty much a thing of the past. Undergraduate methods