

The Teacher

Teaching Research Methods: An Experiential and Heterodoxical Approach

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Given that most students who enroll in undergraduate research methods courses will not go on to conduct original research, such courses should primarily train students to be intelligent consumers of research. Unfortunately, in my experience, most undergraduates dread research methods courses. Generally, they tell me that they find them irrelevant and difficult. Irrelevant, in that many of them are unconvinced that a course in research methods is anything more than a hollow, academic exercise, and difficult, in that “many students suffer from mathematical phobia” (Hy and Hughes 1988, 61).

A teacher of research methods must address these concerns. To be more relevant to students, these courses should be broadly focused, encompassing a variety of research techniques. To be more interesting to students, teachers of research methods courses should actively engage students in participative exercises.

Indeed, when teachers of research methods acknowledge the breadth of the field of political science, they should ask how this class can be taught as something more than a statistics course with implications for political science. Such a course should roughly mirror the research process itself and actively engage the student. It should approximate the research process by providing students with practice in formulating a research question; conducting a literature search; collecting data and information; and analyzing political phenomena.

Encouraging Heterodoxy

An Empirical Orientation

The teaching of research methods courses usually falls under the purview of academics with an empirical orientation. Empiricists in the political science field are usually considerably more interested in a well-defined research methodology than those researchers who employ a less empirical or more subjective research style.

Similarly, most standard research methods textbooks are heavily steeped in the scientific method. In addition to devoting considerable attention to the characteristics of nominal, ordinal, ratio, and interval level variables, the intricacies involved in sampling, and the importance of t-scores, most of them closely resemble statistics texts in that they are replete with mathematical formulae. Specifically, they instruct the reader how to calculate measures of association like the Pearson Product Moment Correlation and Kendall's Tau B; how to determine the regression line for a set of data; and how to formulate levels of significance.

However, political scientists and other social scientists who do not follow the tenets of the strictly empirical method also conduct research that is worthy of study. To teach a research methods course that focuses only on the scientific method and statistical techniques is to ignore a large portion of research being conducted within the discipline. As Gibson Burrell and Gareth Morgan noted in *Sociological Paradigms and Organisational Analysis* (1979), not all research in

the social sciences conforms to the scientific model.

Specifically, those researchers who adhere to the tenets of what Burrell and Morgan refer to as the radical humanist and interpretive paradigms conduct a style of research that is, by their own admission, subjective. In fact, these social scientific researchers deny that they are scientists; trained observers perhaps, but not scientists. During the course of their research, they often try to step in the shoes of the people that they are studying and immerse themselves in their “lebenswelt” or life world. They openly acknowledge the subjectivity of their research methods, believing that social scientific researchers can never truly rid themselves of their biases. Nor they believe should they conduct a style of research that is supposedly value free.

A research methods course that omits this form of subjective research is depriving its students of a valuable alternative research methodology. Such a one-dimensional approach to the teaching of research methods spurns creativity, encourages conformity, and ignores the field's heterodoxy.

Suggested Textbooks

I find three books particularly useful in teaching this course. *On Becoming a Social Scientist* by Shulamit Reinharz is both an autobiography and a critique of the scientific method. It is an account of three case studies reported by a researcher who was trained as an empiricist while in graduate school,

but later rejected the scientific model and became a critical theorist. Specifically, it speaks to her disillusion with survey research and participant observation.

Instead, she proposes to extend the boundaries of participant observation by advocating a form of research called experiential analysis. Experiential analysis is a form of research that encourages the researcher to use a variety of alternative techniques—some of them quite openly subjective—as a means of learning about a particular sociopolitical phenomenon.

According to Reinharz, researchers who engage in experiential analysis should be guided by the following principles: the research should mirror the researcher's personal concerns; the research product should be a mix of rational analysis and intuitive insights; the research product should be well written and be geared towards actively engaging the potential reader; it should be a combination of objective and subjective findings; and it should reflect explicitly the personal values of the researcher.

On the other hand, I also use *Political Science Research Methods* (Johnson and Joslyn 1991), which is a standard introduction to empirical social science research. Like most texts of its kind, it presents the basics of the empirical method. It exposes students to the language and principles of science, including levels of measurement, the elements of research design, sampling techniques, the aspects of empirical observation, content analysis, and various forms of data analysis. Although this text is an excellent one, it is my sense that too often this kind of textbook serves as the beginning and ending for an undergraduate research methods course.

Falling somewhere between the strictly empirical and the subjective approach to research is Robert Yin's *Case Study Research: Design and Methods* (1988). Yin demonstrates the applicability of the case study to social scientific research. He writes that the case-study researcher relies upon many of the same techniques as the historian, except that the case-study re-

searcher also relies upon direct observation and systematic interviewing (1988, 19). Furthermore, Yin distinguishes the case-study approach from qualitative studies, suggesting that some case studies can be based entirely on quantitative evidence. It is Yin's intent to change people's impressions of the case study, which according to him is stereotyped by many as "a weak sibling among science research methods" (1988, 10).

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These three books used in combination demonstrate to the student that there are several alternate ways to conduct research, rather than "one best way." Each research methodology has its positive aspects and its deficiencies; a heterodoxical approach to the teaching of a research methods course emphasizes both.

Engaging the Student in an Experiential Simulation of the Research Process

Formulating the Research Question

Formulating the research question or developing a testable hypothesis is a creative activity. Indeed, all stages of the research process involve creativity. When social scientists conduct research, they rely heavily upon their powers of intuition and sense of exploration. Conducting research often involves breaking the boundaries of conventional wisdom and refashioning existing ideas in new ways—configuring a new gestalt. Few researchers would deny the

importance of creativity in the conduct of research. But how often do teachers actively facilitate the creative process within the context of a research methods course?

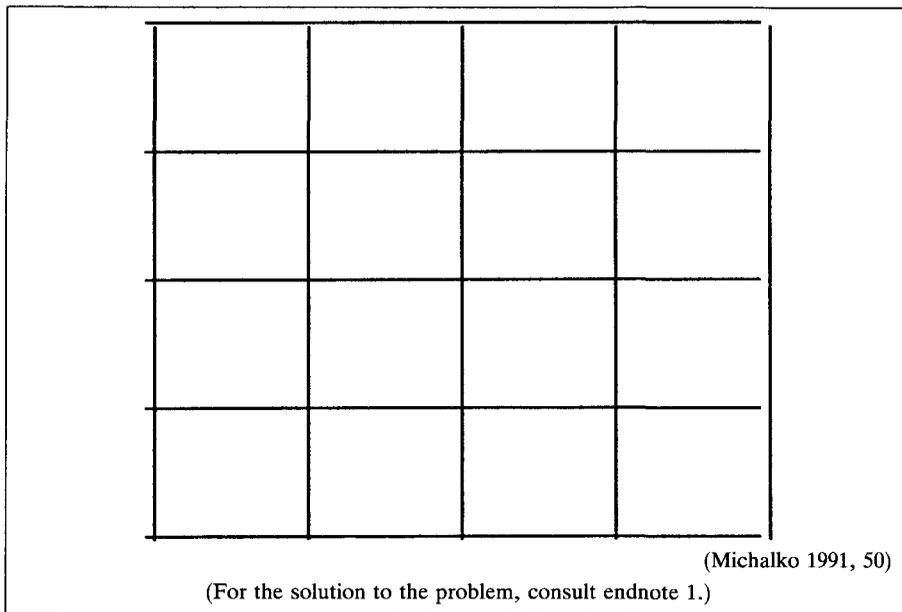
Several simple exercises can illustrate in a general sense the creative process and permit students to dabble in it. One of them challenges students to identify the number of squares that they see in Figure 1. Another exercise challenges students to find a way to connect a set of nine dot clusters using only three straight lines (see Figure 2). I expose students to these problems as a means of encouraging them to confront puzzling questions in new ways. Although instructors can probably not teach creativity, they can encourage it, indeed, even facilitate it in the classroom.

However, how can an instructor relate creativity to the study of politics and the formulation of a research question? One way is to have students maintain a regular journal that documents their thoughts about political events or public policies that are reported by television news or the newspapers. In addition to describing the event or policy, the students should record their views regarding it, as a means of tapping and helping them to refine their normative political views. These journal entries are then used as the basis for class discussion.

In the course of this discussion, the instructor might explore the following questions with the student:

1. If they were to study this topic further, how would they emphasize the phenomenon's normative aspects or study it from a more empirical perspective?
2. How does this phenomenon relate to accepted political concepts and what sources would the student consult in order to conduct a literature search?
3. What would be an appropriate research question associated with this topic and how would the researcher limit the topic's parameters?
4. Is this research question particularly novel or has it been studied before?

FIGURE 1



5. What specific research methodology would the researcher employ?
6. What possible obstacles would the researcher face in studying this topic?

Conducting a Literature Search

Some students, particularly undergraduates, are woefully in need of improving their library research skills. An essential aspect of a research methods course should include a module with a librarian who lays out the resources of your institution's library. Students should become familiar with sources of data like *The City and County Data Book* or *The Statistical Yearbook*. I also ensure that students become familiar with our

library's computerized catalogue system and learn how to locate books and articles by topic area, author, title, and keyword.

Once this information has been absorbed by the student, they then apply it to a practical exercise. I provide each of my students with certain keywords and have them search out three articles relating to these keywords. After they have located the relevant articles, the students are then told to read each of them critically and present the following information in a written essay: the research question or hypothesis tested, the major points of the article presented, the research methodology used, and the conclusions that were drawn. Students are asked to answer the following questions:

1. How could the researcher have studied the phenomena using a different methodology?
2. Was the writing style and the logic of the article coherent?
3. Did this article adequately answer the "So what?" question or in other words, "Did this article contribute meaningful information and insight to the field of political science?"

Collecting Data and Information and Analyzing Political Phenomena

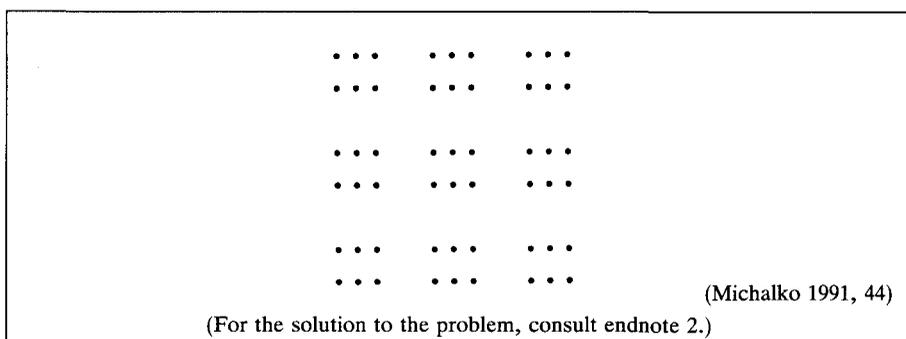
As junior researchers, students should gain experience in developing data collection instruments and actually collect and analyze data in addition to other types of information. The following exercises actively involve the student in the collection and analysis of information.

Content Analysis. The content of printed and oral material can be analyzed in a variety of ways. Conventionally, content is analyzed quantitatively. John Fiske and John Hartley noted in *Reading Television* (1978) that generally content analysis "is not concerned with questions of quality, of response or of interpretation, but confines itself to the large scale, objective survey of manifest content" (1978, 21).

Typically, news broadcasts might be analyzed on the basis of the number of stories that are generally supportive of the American government, or the amount of coverage devoted to different types of stories. Television news can also be analyzed qualitatively. As Fiske and Hartley noted "the reading of television must progress from the manifest content to the latent content and very few analysts have begun to tread this path" (1978, 21).

In accord with this research style, I present students with taped television news broadcasts from several nights on different networks and have students try to search out the overall story that is presented by the networks. Or even in a broader sense, I might ask them what modern-day myths the networks are presenting. In a deconstruction of the television news and in an attempt to discern the under-

FIGURE 2



lying story, students are encouraged to ask the following questions:

1. What biases appear to be evident?
2. What sources are consulted?
3. How could a particular story be covered differently?
4. How are authority figures treated?
5. What differences in news coverage between the networks are evident?

These and other questions can assist students in critically analyzing the television news and conducting a qualitative content analysis.

Survey Research. Survey research and questionnaires lie at the heart of the empirical method. In order to get “good” data, the researcher must devote considerable care in developing a data-gathering instrument. Allowing students to formulate and test a short questionnaire helps them hone their research skills.

In this exercise, a team of four to six students are given a hypothesis and several alternate hypotheses and are asked to develop a questionnaire for the purpose of testing it. They are also provided a hypothetical budget. In addition, before developing their questionnaire, they must weigh the following hypothetical issues and be able to justify their decisions:

1. How will they collect data? Will they collect it through in-person interviews, telephone interviews, or mailed questionnaires? Can they provide some incentive to ensure a higher response rate?
2. How many questions will they ask? At what point will the respondents likely become bored?
3. What type of questions will they ask? Will they be multiple-choice, yes-no, open-ended questions, a Likert scale, or combination of these options?
4. What will be the population tested by their survey and how will they go about sampling it?

Once they have answered these questions, they then develop questions designed to test the principal hypothesis and alternate hypothe-

ses. These questions are then tested out in class by providing the questionnaire to members of other teams. Following the presentation of the questionnaires, different teams meet together to discuss whether the meaning of the questions was clear and whether they were, in fact, valid indicators of the concepts tested.

Data Collection and Analysis.

There are numerous references from which students can collect data of nominal, ordinal, interval, and ratio level variables. In this exercise, students make use of their library skills. Students are split into small teams and are given the assignment to formulate a hypothesis; determine the unit of analysis; develop valid indicators; select a sampling strategy; and locate the appropriate reference book.

Upon their return from the library, they compile the data and conduct the suitable statistical measure(s) of association. I then ask them the following questions:

1. Was the association between the variables positive or negative?
2. Was there a strong or a weak association between the variables?
3. If researchers were to continue this project, what additional variables should be investigated?
4. With what degree of confidence, can researchers make conclusions about the degree of association between the tested variables?

Process Consultation. A less used form of data collection is called process consultation, a technique often used by organization development consultants to analyze a group’s interactions by analyzing how a group’s “members communicate particularly in face-to-face situations” (Schein 1969, 15). Process consultation is different from most forms of social science research in that the information collected by the researcher is fed back to the people who were observed. Indeed, the information is collected for the express purpose of improving the functioning of the group. Typically, the process consultant

observes a group meeting and records, among other things, who communicates with whom—for how long and how often; who interrupts whom; and the body language of participants. The trained observer then feeds back to the group that person’s observations.

This exercise should be conducted simultaneously with another group exercise so that the participants will behave more naturally. Exposing students to a process consultation exercise will not transform students into expert group observers, but it will at the very least introduce them to an alternate way that data can be used.

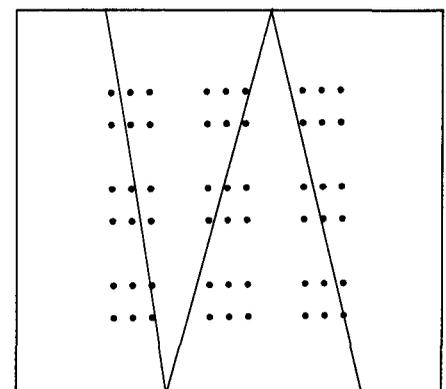
Summary

Research methods courses should, at the very least, incorporate two overarching principles. First, research methods courses should be heterodoxical in their approach towards research. In such courses, instructors should overtly demonstrate the field’s variety. Secondly, they should actively engage the students. Particularly in a research methods course, students learn best by doing. Statistical formulae and theoretical concepts hold little meaning for students unless they learn in an environment in which they actively participate.

Notes

1. The illustration includes 30 squares.
2. The cluster of dots can be connected by three diagonal lines as shown in Figure 3.

FIGURE 3



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Traditional Versus Technology-Aided Instruction: The Effects of Visual Stimulus in the Classroom*

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The extravagant claims of the vendors of multimedia applications have raised the expectations of teachers who are searching for ways to improve their classroom performance. These teachers frequently see multimedia resources as a natural way to present material to a generation of students weaned on hours of television.

Educators also assume that the students of today will learn and retain more through visual or computerized instruction, or that students, at a minimum, will enjoy their educational experience more if it is enhanced by visual stimulation. For example, it is logical to think that students who are learning about congressional politics will gain a better understanding if they can see the U.S. Congress at work.

One major pitfall in this technological approach, however, is the enormous cost of many multimedia applications, especially in times of tight budgetary constraints. Perhaps more importantly, some evidence suggests that the use of technology and other innovations in the classroom does not significantly improve student performance (Janda 1992; Spencer 1991; and Summers 1990–1991). Before educational institutions spend signifi-

cant portions of their budgets on multimedia technology, they should consider the utility of such expenditures.

The Experiment: A Brief Description

We undertook this small, controlled experiment to see whether the use of short video clips in the classroom would enhance our students' ability to learn and retain information about some basic concepts in American government. We divided 117 freshmen into six sections in an introductory American government class at the United States Air Force Academy. As one might expect at a military academy, this population was fairly homogeneous.¹

The students were placed into specific sections by an alphabetic process; the first student was placed into section one, the second into section two, and so on. Each instructor had three sections of approximately 19 students. For each instructor, two sections were designated "treatment" or "video" sections—a total of four sections and 79 students. Each instructor also had a section labeled "traditional,"

which would serve as control groups, with a total of 38 students.

Through this relatively random process, we were fairly confident that the sections began with no significant differences in aptitude. This assumption was also supported by the results of an American government pretest administered to all incoming students the previous summer. The independent t-test results in Table 1 demonstrate that the pretest performance of the two groups—"traditional" and "video"—was indistinguishable.

In the video sections, many of the concepts in the course were presented through video clips.² The two instructors jointly planned each lesson to ensure that all video sections received the same video clips. These clips were then shown in all of the video sections. For example, when discussing judicial restraint, we showed a short video clip of Judge Robert Bork discussing this concept during the Senate Judiciary Committee's hearings to consider his ratification for the Supreme Court.

In the other sections we used a traditional method of classroom instruction to provide a control for the experiment. In these sections almost all teaching was accom-