Mini-Games for Teaching Political Science Methodology

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ABSTRACT   Students often find lectures on political science methodology difficult to grasp. Based on our success of simulations and games in teaching various political science theories, we created several mini-games to help students gain exposure in engaging ways with aspects of quantitative and qualitative methodology. We use techniques in which students learn through "gimmicks" (Schacht and Stewart 1990; 1992), for which they are the data points that they are studying. We believe that drawing conclusions based on what students do and think empowers them to better understand the sometimes tricky elements of political science methods. Each of the three games described in this article required little to no preparation time. We have used these mini-games in several courses and have received positive feedback from students about their utility. Thus, we are sharing them for more general use.

If you teach your students the basics of political science methodology, then we are willing to wager that there is a strong likelihood that some felt lost or hostile to the approach (Asal et al. 2017). Students often find lectures difficult to understand, and they struggle to fully grasp the meaning of what concepts must be learned. There is a literature that tests the efficacy of lecturing as a teaching tool (Costin 1972; Lammers and Murphy 2002). Some studies have found it to be less effective in comparison to interactive approaches or active learning (Knight and Wood 2005; Walker et al. 2008), whereas some scholars believe the traditional lecture format should be used together with active learning to achieve "specific pedagogical and practical goals and learning outcomes" (Archer and Miller 2011, 430).

In our experience, simulations and games are useful for teaching students theoretical concepts by making them "lab rats" in their own experiments (Asal 2005).[1] There is substantial research showing that simulations can be useful for teaching about theory and content (Shaw 2004; Smith and Boyer 1996). DeNeve and Heppner (1997) and Miller and Groccia (1997) both reported that students taking courses that incorporate active-learning techniques responded with higher satisfaction in follow-up surveys than those taking traditional-format courses. Simulations also enable educators to engage students with diverse learning styles (Brock and Cameron 1999; Shellman and Turan 2003). A rich literature considers active learning specifically in the discipline of political science. Archer and Miller (2011) provided an overview of the use of active learning in a review of more than 500 introductory political science syllabi. They found that the prioritization of active learning is low but can vary across subfields. In an experiment with history and political science college courses, McCarthy and Anderson (2000) found that students who engaged in role play and collaborative exercises performed better on standard evaluations in the courses. Frederking's 2005 experiment had similar results in an introductory American government course. Previous scholarship found that students grasped international relations and comparative politics theories more soundly through simulations and games (Asal et al. 2017). Given the challenge that methods can present to students, there is evidence that simulations can make subjects more interesting and enjoyable (Glazier 2011; Krain and Shadle 2006; Pettenger, West, and Young 2013).

It is noteworthy that other than the theoretical models, many undergraduate students find quantitative methods particularly difficult to understand (Asal et al. 2017; Slootmaeckers, Kerremans,

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and Adriaensen 2013). Consequently, they often feel anxious before learning a quantitative method—especially data-analysis techniques—which could lead to poor performance (Onwuegbuzie and Wilson 2003). Classroom simulations and games provide opportunities for students to experience firsthand theory applications through their own participation and observation as opposed to mathematical concepts defined in textbooks (Coffey, Miller, and Feuerstein 2011; Hess 1999; McCarthy and Anderson 2000). Active engagement in games generates students' motivation to comprehend the knowledge with their own critical thinking (Garfield and Ben-Zvi 2007; Lantis, Kuzma, and Boehrer 2000). Lane and Tang (2000) observed that this type of active-learning approach generates more effective teaching outcomes and better students' performance.

class; the discussion time varies according to preferences of students and instructors.

THE "WHEN DID THE UNITED STATES BECOME A DEMOCRACY?" GAME

In the introductory lecture to democracy in comparative politics, we asked students to participate in a short exercise to demonstrate how operationalizing democracy differently (in definition and time) could affect a study's results. In terms of procedures and inclusiveness, most scholars of democracy followed Dahl (Caraway 2004, 444). Inclusiveness can be problematic because scholars often focus on adult-male suffrage (Caraway 2004, 444). Paxton (2000, 93), for example, found that most definitions of democracy do not incorporate gender, which has resounding

Based on our classroom successes using games to teach theories, we created several mini-games to help students gain an intimate understanding of methodology aspects in a new and engaging way. These mini-games require their active participation such that the knowledge is constructed and perceived through their own learning experience by playing roles in the exercises (Asal et al. 2013; Pettenger, West, and Young 2013).

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This article presents three mini-games that focus on basic elements of qualitative and quantitative methodologies. Although we use these games to illustrate different aspects of methodology, they also are useful in reinforcing important points from required readings.[2] First, an exercise titled "When Did the United States Become a Democracy?" emphasizes the importance of an author's definition and operationalization of a concept. It also highlights how operationalization has a lasting effect on research findings. Second, the exercise titled "What Are Attributes of a Good Friend?" explores the challenges of operationalization in social science rather than hard science. It also touches on the hurdle created by personal bias. Third, the exercise titled "Who Is a Liberal and Who Is a Conservative?" helps students to understand the basics of case comparison. The authors are willing to share the PowerPoints for all three exercises.

There are some commonalities to the games. None of them require any material cost to prepare and perform other than the class time needed to conduct the game and the debrief exercises in a discussion. The exercises take 10 to 15 minutes to complete in

implications for accurately measuring it. Incorrect operationalization can lead to the misspecification of transition dates to and improper descriptions of the causes and emergence of democracy (Paxton 2000, 93–94). Like Paxton, we found that omitting certain groups shifts how democracy is conceptualized and measured, which is what we wanted to illustrate to our students. When we asked students to provide a definition of democracy, many first answered "the right to vote."

Using voting as a proxy for democracy, we demonstrated how the US definition of it morphed over time. We asked all students to move to the back and sides of the lecture auditorium. We announced when certain groups could sit down because they would be those who could vote. We first asked all white men who hold property to sit down. Because the class consisted largely of students in their late teens and early twenties, few sat down. We asked when in American history would this group comprise the only eligible voters, to which several students answered "at the founding of the United States." We then asked African American males to sit down, indicating that they could do so after the 15th Amendment was passed. We then asked them to stand back up, demonstrating when that amendment was repealed. We asked white women to sit down to depict the 1920 passing of the 19th Amendment. We asked Native Americans to sit down to exemplify when Congress granted all Native Americans citizenship in the 1924 Indian Citizenship Act. Finally, we asked all African Americans, male and female, to sit down to demonstrate the passing of the 1965 Voting Rights Act.

In this exercise, students kinesthetically participated in differentiating among definitions of voting (as a proxy for democracy) throughout American history. The main motivation of this exercise was to demonstrate a need for precision in definitions (i.e., because students offered the right to vote as a proxy for democracy), temporal considerations (i.e., how those who could vote changed over time), and group inclusion (e.g., females and various minority groups). In our experience, the conversation

that this discussion sparked—not only about democracy but also about the impact of operationalization—was productive.

THE "WHAT ARE ATTRIBUTES OF A GOOD FRIEND?" GAME

This exercise is useful in introducing quantitative-analysis methods and the advantages and challenges they present. It gives students classroom experience with data collection in social science and preliminary statistical inferences. In this exercise, students interact with quantitative-analysis basics.

The discussion questions also motivated them to explore the benefits and limitations of utilizing quantitative methods.

THE "WHO IS A LIBERAL AND WHO IS A CONSERVATIVE?" GAME[3]

To demonstrate how to compare across cases, we asked three students to assess which factors determined how they voted in the 2016 presidential election. It is important to note that we asked for volunteers and only those who felt comfortable revealing their

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At the beginning of this game, we asked the class the following question: "In your opinion, what characteristics do you look for in a friend?" Students offered myriad criteria, among which about 10 attributes were selected as most important by five student representatives. For example, humor, kindness, and intelligence were among the most common attributes. All students then voted on the selected variables, which resulted in aggregated data of opinions. Next, the variables were ranked according to students' votes and presented in a frequency table. The five highest-ranked criteria could be selected variables listed in a survey regarding our discussion questions, as follows: (1) How do we operationalize these factors?; (2) Do these series of factors truly capture a good friend?; and (3) What are the challenges and advantages of quantitative methods?

Given that undergraduate students often find that studying quantitative data collection and analysis is relatively boring, the primary goal of this game was to introduce it in a light and engaging way. A familiar and intriguing topic used in this game captures their attention and reduces the obscureness of methodology. By virtue of participating in this game, students realized that—other than the challenges of the quantitative method (e.g., transforming qualitative data into numbers)—this approach has noticeable strength in generalizing results and accommodating probabilistic predictions. In addition, the game and the discussion questions motivated them to think about how personal bias is reflected in an aggregate dataset through their own class experience. For instance, students can compare their set of criteria—an individual data point—to those most voted by the whole class to determine if it is an outlier data point. The frequency table, conversely, shows whether the sample distribution is more polarized or more uniform.

We also expanded the students' experience of the game to connect to Caprioli's (2005) academic work, "Primed for Violence: The Role of Gender Inequality in Predicting Internal Conflict," which was required reading in this course. The class discussion of the exercise paralleled the research design, data operationalization, and data analysis in Caprioli's article. In this way, students had a deeper grasp of a real-world application of the quantitative approach.

This game boosted student interest in course material and concisely and saliently visualized the process of quantitative analysis.

voting preferences. Three volunteers were selected who had differences in gender, political ideology, and background. We wanted to see which factor contributed most to the outcome variable (i.e., how they voted in the election). The instructor asked them about certain political issues such as immigration, education, and the environment. Participants were asked about their demographic and familial background in addition to their political ideology. Based on the answers to each question, the class had to determine which factor contributed most to their voting behavior. Among their answers, political ideology stood out as the most influential factor. Thus, we discussed how this factor led to how the students voted in the election.

Based on examples directly from the exercise, a lengthy discussion ensued about how cases should be compared. As a class, we concluded that most students voted in the election based on their political ideology. Students who were strongly connected to their political ideology expressed a greater likelihood of voting for their respective political party (Palfrey and Poole 1987). They also were more likely to have consistent political views on certain issues that aligned with the political parties. Thus, demographic factors such gender, race, and income—which often are considered to lead to certain voter outcomes—played a lesser role in this exercise. These factors were not relevant to how students voted in the election.

Students learned that political ideology often influences how individuals vote in the presidential election. They discussed how political ideology also may stem from their upbringing, which caused them to vote how their parents would vote (Jennings, Stoker, and Bowers 2009). From a methodological perspective, students understood how case comparison can be a useful tool of analysis.

CONCLUSION

In our experience, students benefit greatly from kinesthetic, hands-on learning exercises in class. Students themselves were literally the subjects they were analyzing; we believe that drawing conclusions based on what they do and think empowers them to better understand the sometimes tricky elements of operationalization, the differences between quantitative and qualitative analysis, and the mechanics of case comparison. All three exercises

required little to no preparation time and they engaged students in a way that methodology lectures rarely do. ■

NOTES

1. Simulations and other active-learning techniques can be more effective than lecture-based approaches. Often, professors dominate the discussion (Brown and Atkins 1988) or conversation mainly involves several students (Bean 2011).

2. For an illustration, see the discussion of the Caprioli reading in the "What Are Attributes of a Good Friend?" exercise.

3. This exercise was developed from Lim (2010).

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