

Short Duration Political Science Simulations

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Abstract

Simulation activities have been used in teaching various topics in political science. Most literature on this methodology focuses on elaborate, time consuming activities. This article examines the creation and use of a one-session budget balancing simulation exercise. The experience with this simulation suggests that it is a useful and practical teaching tool.

Introduction

Engaging students, stimulating discussion, and reinforcing key concepts are important elements of teaching undergraduate political science students. There are situations where it is not sufficient to rely on assigned readings and typical lecture or discussion format classroom experiences in political science courses. A variety of activities have been employed to enhance student learning in courses within the discipline. One successful method involves the use of simulation exercises. Many simulations described in the literature are elaborately constructed and time consuming to conduct. However, there are situations where it is not possible, appropriate or practical to spend substantial course time conducting an in-depth simulation. In those situations it may be appropriate to utilize a short duration simulation to achieve specific objectives with a course.

This article focuses on a short duration simulation exercise in an upper division political science seminar on Education Policy and Politics offered in spring 2008. Unfortunately, the literature on this type of active learning in political science courses is somewhat limited.

This exercise was developed to give students in a better sense of the complexity of education finance in California. Because of there were a range of other topics covered in this course it was not a suitable setting for an extended simulation. Since the time available was limited, the topic was addressed through a combination of readings outside of class, lecture and a short duration simulation that forced students to grapple with a set of issues in school budgeting. The success of this exercise suggests that a well constructed short-duration simulation has value in augmenting classroom instruction.

In-Class Simulations

Simulation activities are not new to those teaching political science. A modest, but growing, number of authors have described how simulations have been used successfully to teach and reinforce content in a variety of areas within political science. Although there are articles examining online or computer based simulations, of primary interest here are those activities which can be conducted in class. These activities have been used to focus on a range of topics including international relations, budgets, legislatures, and elections. Most of the simulations described in the literature have been

sophisticated, long term activities. The literature on simulations in political science highlights the benefits and drawbacks of this methodology.

Proponents of simulation exercises cite benefits associated with student participation in this type of active learning activity. Simulations are described as creating settings for "complex, dynamic political processes in the classroom, allowing students to examine motivations, behavioral constraints, resources and interactions among institutional actors" (Smith & Boyer, 690). Other benefits cited are enhanced public speaking skills (Wheeler, 156), opportunities to directly apply theory (Kanner, 795), direct experiences with course material (Endersby & Webber, 523), enhanced understanding of course material (Mariani, 789), and greater understanding of political processes (Baranowski, 34). By taking on roles of key individuals these exercises cause students to "put on the skin" of another person (Kanner, 795). This personal experience of roles may prompt students to examine differing views and positions more carefully and, perhaps, foster empathy for others who hold differing positions (Wheeler, 156). Of practical benefit, is the ability "to make interesting what can otherwise seem a very dull topic" (Wallin, 407). Articles focused on political science simulation exercises offer creative applications designed for students studying a range of topics within the discipline.

Several authors provide information for those seeking to design their own simulations. Smith and Boyer offer descriptions of how to create an activity and elements that contribute to a successful simulation. Frederking identifies five steps common to most simulations: establishing learning objectives, constructing the activity, advance preparations, the exercise, and debriefing with students (Frederking, 386). Asal and Blake offer a detailed description of the process of creating a simulation. According to Kanner "situations involving negotiations and the allocation of scarce resources are ideal settings in which to use simulations" (Kanner, 795). Refinements for specific topics are offered in international relations (Kanner; Raymond & Sorenson; Shellman & Turan), electoral campaigns (Caruson; Mariani), federal policymaking (Endersby & Weber), legislative process (Baranowski; Frederking), and federal budgeting (Wallin). Much of the literature related to simulations describes relatively sophisticated exercises and details how to develop successful activities for class use.

Raymond and Sorensen describe potential problems associated with in-class simulations, including: the opportunity costs from the time consumed by the exercise; competing demands for time, physical space and technology; frustration due to deviations from traditional student-teacher classroom roles; difficulties in grading; oversimplifying issues; and design problems resulting from unclear learning objectives (Raymond & Sorensen, 179). In particular, one disadvantage cited relates to sacrificing "a degree of breadth in substantive coverage in return for a deeper level of student understanding on more narrow topics" (Smith & Boyer, 691).

A general concern about the use of simulations centers on the lack of quantitative data on the effectiveness of this teaching methodology (Smith & Boyer, 693). Several authors report positive results based on observation of student performance, student survey responses or other forms of student feedback (Caruson; Endersby & Weber; Kanner; Raymond & Sorensen; Shellman & Turan; and Wallin). Both Baranowski and Mariani found measurable impacts of these activities on student learning using pre and post tests (Baranowski, 41 and Mariani, 793). Frederking's multi-year study also

highlights the value of this methodology. Although there are constraints associated with this teaching methodology, it appears, from both the modest quantitative data and significant observation and anecdotal evidence, that sophisticated simulations are an effective teaching tool when used appropriately.

Short Duration Alternatives

Most simulations in the literature are fairly sophisticated activities conducted over extended periods of time. These exercises appear to represent a significant component in courses where they are used. While such activities offer multiple advantages, there are many situations where the development and use of a large scale multi-session activity is not practical or appropriate. In the situations where constraints prevent the use of more elaborate activities, a short duration simulation can be particularly useful.

While a shorter simulation "lasting an hour or a week does not adequately provide students with the depth of knowledge obtainable in a lengthy simulation" (Endersby & Webber, 520), it can address other important objectives and avoid some constraints associated with more elaborate exercises. With limited objectives, careful construction, and appropriate goals, relatively brief exercises can prove very useful.

The objectives and outcomes expected from a short duration simulation will be different than those that are more central to the overall construction of the course. Instead of providing students with an in-depth understanding, the purpose of the exercise becomes one of highlighting, reinforcing or providing an experience of a particular point, activity or concept. This focuses on aspects of active learning that reinforce other work, strengthen retention of material and give students increased control over their own learning (Wheeler, 155).

A key principle when constructing a short simulation is simplicity. Baranowski noted "my need to spend no more than one class session on the simulation forced me to design something fairly simple. (Baranowski, 35). Among the methods to shorten the time required in-class are conducting portions of the activity online, shifting some work to groups that meet outside of class, and reducing the options presented while narrowing the goal or target outcomes for participants (Wallin, 409). Limiting the volume and scope of material significantly simplifies the activity. If constructed carefully, the simulation will still engage students in ways that are not possible with a lecture while also giving a view of the process or problem being studied that conveys a few of the central issues associated with the topic.

A Short Duration School Budgeting Simulation

After experimenting with some very basic in-class exercises in other courses where students were asked to take on specific roles to address problems or questions, it appeared that the topic of school budgeting might be well suited to such an activity. The result was a simulation I developed for use in an undergraduate seminar on Education Policy and Politics.

In this course, which I taught with Tiina Itkonen, a colleague from the Education faculty, we examined a range of policy issues from both practical and theoretical perspectives. We alternated teaching sessions on several topics related to the course. In order to have time to address each topic we identified, we scheduled a single three

hour session for each topic. As a result, each of us struggled to find ways to give students a sense of the processes involved and the issues raised by complex topics in one class session.

Given the course structure and schedule, there was only one class meeting allotted to issues specifically related to education budgets in California. Given the central role of resources in implementing various policy alternatives, an understanding of the complexity of the local budget process is critically important, but difficult to capture in a single three hour session. Beyond the general issues raised by the state's financial condition, educational budgeting in California is complicated by a number of constitutional and statutory constraints imposed by voters through the initiative process. While it is possible to read about these conditions, lecture about them or discuss them in class, it is difficult for students to comprehend their meaning until they are forced to struggle with these circumstances in some practical way.

After considering the concepts and issues that needed to be conveyed in this lesson, I concluded that a short duration (approximately an hour and a half) exercise where students are assigned different roles with the task of balancing the budget of a hypothetical California city school system would provide a means to focus attention on key ideas. The exercise was intended to give students a better understanding of the complexity and cumulative impacts of the situation faced by policy makers at the local school district level. Information from the state's online education database (EdData, 2008) was used as the basis to create the hypothetical Midville Unified School district. The student, staffing, budget and community characteristics of this district were intended to highlight several conflicting priorities and the impact of the state's educational finance structure on local decision makers. I identified a number of discrete school district operations that would be potential targets for budget reductions (e.g. athletics, libraries, neighborhood schools with declining enrollments, music programs, etc.), but which would likely generate considerable discussion when students would be asked to prioritize them. Given the magnitude of state budget reductions being actively considered at the time, the exercise was structured to force students to consider difficult and painful choices.

Prior to the simulation, students read "Getting Down to Facts: School Finance and Governance in California" - an in-depth study commissioned by the Gates, Hewlett, Irvine and Stuart Foundations on the status of public school operations in California (Loeb, Bryk & Hanushek, 2007), and participated in a brief lecture and discussion on the topic. Once the exercise began, the seminar of about 15 students was randomly divided, with three groups designated to serve as the school board, the teachers association, and local parents. Students were provided with a brief (one and a half page) handout containing information about the setting, school district enrollment, finances and demographics, as well as a chart indicating the costs associated with various programs and facilities operated by the district. Each group was instructed to choose a leader. Their charge was to identify sufficient cuts and/or revenue increases to close a projected \$2.6 million budget gap.

Once the activity began, students quickly adopted their roles and were able to argue convincingly about the merits of various positions. The material provided in the exercise did not assign policy positions associated with each role, however almost

every student adopted positions that would generally be associated with his or her role. While it was clear that the district would have to make significant budget cuts, the proposed alternative approaches from each group closely reflected the interests they were assigned to represent, and prevented the whole class from reaching agreement on an approach to balancing the budget. Despite that fact that the activity was ungraded, student participation and discussion was focused and consistent among students in the class throughout the duration of the activity.

Although their stated task was to balance the district's budget for the coming year, the primary objective behind the activity was not have students produce a balanced budget, which was unlikely given the time available, but to gain a greater appreciation for the complexity of the process and the range of competing demands. In fact, despite lively discussion and creative proposals, students were able to make proposals for significant budget changes within each group, but were not able to offer proposals for a balanced budget. As Caruson observed in with an election simulation, "the outcome may not be as important as the process" (Caruson, 306). Following the exercise I took time for a debriefing. This discussion allowed an opportunity to talk about the process, policy issues, as well as items such as policy windows, how issues are framed, and how the activity reflected different theoretical frameworks discussed earlier in the class.

The exercise appears to have been effective in reinforcing key notions about the complexity of the state's educational finance structure and process. It was also successful at stimulating student engagement in the topic. The simulation was observed by a colleague in the political science program who was conducting a peer evaluation of teaching. In his comments he noted,

Students were thoroughly engaged, every student in the class participated and students had meaningful discussions of the pros and cons of various potential reductions. Through participation, students learned of the differing views of the different stakeholders in the school funding process ... and experienced the difficulties inherent in reaching consensus.

Both formal written feedback, as well as oral comments from students echoes these observations. In the simulation debriefing and subsequent conversations several students noted that the exercise caused them to take on roles and advocate positions that were different from those they normally espouse. There were also a number of unsolicited student comments about how they better understood why decisions about school budgets were so difficult (these discussions continued with some students well beyond the end of the semester). These responses were reinforced in the student course evaluations which ranked of the course effectiveness as 4.7 on a 5 point scale. On the question about whether class sessions were interesting and engaging the ranking was 6.8 on a 7 point scale. This feedback suggests that the activity both engaged students in the topic and caused them to grapple with concepts that are often difficult to convey through readings or lectures.

Conclusion

Using simulation activities to convey a sense of the complexity associated with a variety of policy problems is intuitively a very attractive approach. The absence of extensive literature, the limited availability of data on effectiveness, and the modest number of examples are all problematic for those contemplating both the practical task

of creating such exercises or the efficacy of employing them. These problems increase with simulations that are small in scale and short in duration.

The budget simulation described in this article offers a modest example for creating and using small scale, short duration exercise. It appears to be a practical tool that enhances student engagement in and understanding of complex issues. Unfortunately, based on its modest scope, this example provides limited new data on the overall efficacy of this methodology. At the same time, this exercise is an example that can be adapted, expanded and replicated. Based on the lessons learned from this activity I am creating a municipal budget simulation for a larger lower-division introductory course. On a practical level short, realistic simulations can help to address the multiple challenges of engaging students and offering richer understandings of complicated concepts in limited time.

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