Simulating a Senate Office: The Impact on Student Knowledge and Attitudes

J. Celeste Lay, Ph.D.
Assistant Professor
Tulane University
Department of Political Science
316 Norman Mayer Building
New Orleans, LA 70118
(504) 862-8301
Fax: (504) 862-8745
jlay@tulane.edu

Kathleen Smarick, Ph.D.
Director, ICONS Project
University of Maryland
3140 Tydings Hall
College Park MD
(301) 405-8516
Fax: (301) 314-9301
kyoung@gvpt.umd.edu

Abstract

Although many instructors are now using simulations and other experiential pedagogies in their classrooms, the effectiveness of such tools has generally not been examined in a systematic way. In this paper, we assess the effectiveness of a simulation of the legislative process in the U.S. Senate as a tool for teaching college students about the workings of the American political system. We used pre- and post-test surveys in two "Introduction to American Government courses,, one of which utilized traditional teaching methods, such as lectures and tests, and one of which supplemented these traditional methods with an on-line simulation. We compare the changes in political knowledge and attitudes within groups, but focus on the differences and similarities between the "control" and "experimental" groups. We find that simulations can be an effective tool for civic education, but that their objectives must be clear and expectations should be reasonable. Students who participated in the simulation gained considerable knowledge of the legislative process compared to their peers in the traditional course, and their levels of cynicism decreased.

The results of the 1998 National Assessment of Educational Progress (NAEP) in the field of civics, viewed as the "nation's report card," revealed that only 26 percent of U.S. twelfth-grade students were at or above a level of civics proficiency, while 35 percent of students in this cohort failed to achieve even basic level of understanding of issues related to the foundations and workings of the U.S. political system and the role that citizens need to play in a democratic system (Lutkus, Weiss, Campbell, Mazzeo, and Lazer 1999). Similarly, only 14 percent of college freshmen in 1998 said that had discussed politics in the past year (Mann 1999), and in the election year of 2000, still only 16 percent of college freshmen discussed politics (Bennett and Bennett 2001). To the extent that political knowledge and discussion predict participation, these findings sounded a loud warning to those concerned about future citizen participation. They also present a challenge to those political science professors who see it as their responsibility to ensure that a next generation of knowledgeable and engaged citizens..

Many believe that civic education is a big part of the answer to dealing with disturbing levels of knowledge, cynicism and apathy. Recent work in political science shows that civic education plays an important role in fostering democratic values and teaching young people the skills necessary for participation (Niemi and Junn 1998; Smith and Niemi 2001; Denver and Hands 1990). Despite evidence about the value of civic education, civics courses are increasingly offered as elective rather than required courses at most high schools and universities. And, of special concern to those responsible for teaching civics, of those few students who take these courses, many are often turned off by pedagogical techniques that, at best, fail to inspire and at worst, heighten cynicism and mistrust among a generation already skeptical of governmental authority. That is, making students take civics courses in either high school or college does not

help to ensure that these students will become engaged citizens; rather, this outcome is achieved when civics education is "done right."

As they work to find the best ways to teach civics, many educators of government and politics are heeding the advice of John Dewey from almost a century ago and are embracing the philosophy that experience and education go hand-in-hand. In both secondary and higher education, instructors have begun to incorporate many forms of experiential learning into their classrooms, including internships, service-learning, and independent research, as well as simulations and role-playing activities. Although such non-traditional teaching methods are increasingly popular among faculty and students alike, the precise nature of the effectiveness of these practices as tools for civic education remains under-examined, as noted by contributors to a 2003 report by the Carnegie Commission and the Center for Information and Research on Civic Learning and Engagement (CIRCLE) (see also Macedo 2004).

In this paper, we examine the effectiveness of one such experiential learning program – an on-line simulation of the U.S. Senate used in an introductory American Government course at a large, public university. We present findings on political knowledge and attitudes from both pre- and post-treatment surveys for both a control and experimental group to evaluate the impact of the simulation. These data reveal that simulation exercises can be a promising approach to civic education, but are by no means a "silver bullet." A simulation with specific and somewhat narrow objectives can heighten political knowledge and change attitudes in certain areas more than traditional teaching techniques do. As instructors consider implementing such simulations into their courses, though, they need to consider whether these specific effects of the simulation are in line with their core teaching objectives for a given course.

Simulations and Political Learning

Simulations and other role-playing activities have been used for years in many different disciplines, including political science, in an effort to make students more active participants in their educational programs.[1] Their positive effects have been documented in several studies. Simulations have been found to benefit students with differing learning styles (Brock and Cameron 1999) and to engage students in the material in ways that a traditional lecture/textbook method sometimes does not (McIntosh 2001; Kille 2002). Simulations have been found to be effective tools for both content learning and skill development (Lantis 1998), as well as means of encouraging both higher-order learning and appreciation for situational complexities (Torney-Purta 1992). In general, it is believed that students are more engaged in a simulation than in lectures and traditional methods, and that course material is reinforced through active learning.

Simulations are especially well suited to enhance students' civic character, as they facilitate learning about the nuances of complex, contentious issues (Cammarano and Fowler 1997). Good citizens emerge when individuals have a true appreciation for the sometimes-messy workings of democracy (Hibbing and Theiss-Morse 1996). Students who are shielded from this conflictual side of democracy and learn instead only about "antiseptic constitutional principles" – as typically emphasized in traditional pedagogical approaches to civics – tend to "recoil from what democracy looks like when seen in action and sometimes inaction" (Hibbing and Theiss-Morse 1996, 62). The traditional lecture format in American politics courses may not be as effective

> in providing students with an adequate understanding of the process underlying democratic decision-making….the interaction and dynamic compromise inherent in the development of public policy can be lost using teaching strategies in which an instructor merely describes this dynamic relationship to students (Endersby and Webber 1995, 520).

---

[1] For one of the earliest uses of simulations in political-science teaching, see Guetzkow 1962.

Indeed, one of the chief complaints from students of American government is that civics instruction is boring. In their comprehensive study of civic education, Niemi and Junn show that students are more knowledgeable in environments where teachers utilize interactive methods, as opposed to only test-taking, memorization and lecturing (1998). These findings are reinforced by the experience of Koch who incorporated a simulation of a congressional campaign into her American government course: Koch's students unanimously praised the simulation activity (1991).

Although there is evidence supporting simulations as a useful civic education teaching tool, this support remains tempered. Much of the evidence related to the effectiveness of simulations is anecdotal and concerns remain that simulations are merely another "teaching fad" that has limited benefits for students. We believe much of this skepticism stems from the lack of systematic research comparing simulations to other teaching pedagogies, and expectations that are much too high. No single method of teaching will engage all students, or improve the knowledge and interest of every young person in a class, or "fix" the levels of apathy and cynicism about government that pervades young people.

We argue that simulations can be valuable tools in helping students achieve *particular objectives*, especially those that traditional methods do not easily translate to students. Simulations alone should not be expected to demonstrate to students all there is to know about the U.S. political and civic society. Rather, civic education-focused simulations should be developed with particular learning objectives in mind (Torney-Purta and Amadeo 2003), and we should expect that political knowledge and attitudes related to the teaching objectives of the simulation will be most affected. This study serves to examine the degree to which simulations

can have such specific effects on students, and goes beyond anecdotal reports of student reactions to examine changes in levels of political knowledge and attitudes between students of American government who were exposed to traditional teaching methods versus those who participated in a simulation. This study, like most, has its shortcomings, but our results can begin to show whether these methods are worth the extra time and effort teachers must expend to use them.

The Simulation

Overview   The simulation was developed by the International Communication and Negotiation Simulation (ICONS) Project at the University of Maryland. Teachers and professors who have incorporated ICONS simulations into their courses and who have analyzed simulation effects believe that these exercises succeed in helping students to achieve associated learning objectives in an innovative way (Torney-Purta 1992, 1998; Vavrina 1992, 1995; Kaufman 1998; Kuzma 1998).

The simulation under consideration puts students in the middle of the law-making process in the United States Senate in an effort to enhance understanding of how this process functions and to increase students' appreciation for the institutions and behaviors at the core of the American political system. Most students believe the law-making process takes much too long and generally lack any appreciation of the argumentation and disagreement which is at the core of legislative process (Bennett 1997). The structure of this simulation reflects ICONS's goal to create an activity that increases student understanding of the nuances of the legislative process and the pressures officials face in setting and pursuing legislative priorities, especially in the face of competing priorities.

Simulation Roles   The mechanics of the simulation follow: students in a college-level introductory American government course are assigned to "work" within one of 15 "fictional" senate offices.[2] Students from each office decided among themselves who would take on specific roles within the office: Senator, Chief of Staff, Communications Director, Legislative Director, and Legislative Assistants. Each senator is a member of two of five Senate committees.

Unlike some similar simulations, this exercise does not give each student the opportunity to be ultimate decision maker (i.e., a Senator). The decision to structure the simulation around Senate offices was a result of one of the learning objectives associated with the development of this simulation: ICONtructureS sought to incorporate the aspect of teamwork inherent in congressional decision-making. Senators may be responsible for the final decisions on legislation, but their staff advises them and the decision-making process is often very collaborative, but the work and contributions of Capital Hill staffs is something that is not apparent to students when they study "how a bill becomes a law." This is one of the nuances of the legislative process intended to be highlighted by this exercise.

The group s built into this simulation also reflects lessons learned about how students learn, whether they are studying politics or any subject: Cooperative learning groups have been found to increase productivity, help develop positive relations among group members, and to enhance self-esteem (Sorcinelli 1991). Further, structured group work in which each student in a group has a clear identity and set of responsibilities has been found to be the most effective approach to group work (Livingstone and Lynch 2000). This structured approach leads to less

---

[2] While the actual names of the senators included in this simulation would not sound familiar to students or their professors, these roles are adaptations of recent and current senators. The actual names of the senators have been changed so that students will not just look at the vote history of the Senator they represent to determine his/her agenda. The senators included represent the ideological spectrum, as measured by NOMINATE scores.

tension among student groups and students seem to be better able to evaluate the overall project and its effects.

As noted, this exercise includes only a roster of only 15 – rather than the full 100 – senate offices. Similarly, the simulation involves only 5 standing Senate committees, rather than the all 16 current committees. This, too, was a decision made by the simulation developers in conjunction with American government professors. While an exercise that included 100 (or 16 committees) would be more realistic in many ways, it could also be highly unmanageable for a faculty member or highly impractical for instructors with smaller classes. More importantly, ICONS's developers determined that the politics of law-making within the Senate could be demonstrated effectively even with this artificially small pool of Senators, so long as those Senators represented distinct interests, constituents, and ideologies. Once students witness the complexities nature of interactions among 15 different offices, it is not difficult for them to extrapolate and understand that the involvement of 85 additional offices makes the law-making process even more complex.

Because the class in which the simulation was used for this study was a large class (more than 200 students), the treatment group course ran two simulations simultaneously, each with the same cast of senator roles. Thus, there were 30 senators (15 in each simulation), each with their own staff. The simulation can be adapted, however, to accommodate courses that are smaller in size or for more advanced students. For instance, the simulation could work in a smaller, upper-level Congress course very easily, or could be modified by eliminating certain staff positions for small classes.[3]

---

[3] ICONS often works with secondary teachers and professors to modify their simulations for the needs of specific classes.

Simulation Scenario and Process   All groups were informed that there were only three weeks remaining in the congressional session and that 15 bills were still under consideration by the five committees included in the simulation. These draft bills were created by ICONS staff and made available to students as they prepared for the simulation (the committees and bills included in the exercise are listed in Figure 1.) The first assignment for the project was for the staffs to determine their Senator's legislative priorities and strategies to achieve those goals, based upon provided information about the Senator's background, state demographics, campaign contributors, and previous voting record, along with references that would help students understand the nuances of the legislation at hand. Each group wrote a research paper in which they described their Senator's background, priorities, and how he or she would likely vote on legislation. These papers also included a total of at least three amendments that they might propose to any of the bills before their Senator's committees. Students decided how the work would be divided so that each member of the group would contribute to some part of the final product.

[INSERT FIGURE 1 HERE]

Following this initial research and planning stage, the simulation itself begins, with three phases. In the first phase, groups debate one another within committees and propose specific amendments to each bill. Phase 1 concludes with committee members voting on each proposed amendment. Phase 2 involves additional discussions among senator-teams, now focused on the fate of each of the amended bills under consideration by the committees, and culminates with votes to determine whether each bill will be reported out of committee or, rather, will "die" in committee. Finally, Phase 3 involves the "full" senate of 15 senators debating, discussing, and voting on all of those bills that have been reported out of committee. As designed, each phase is

expected to last for at least one week. There is no pre-scripted outcome to this simulation. The students determine the exact content of amendments, and the votes of the students determine the fate of each bill.

Throughout each phase, all members of each group continue to work to pursue their Senator's agenda through ongoing discussions, negotiations, and deliberations with the "staffs" of the 14 other senators in the simulation, while having to determine within their senator-team the best way to achieve their goals.

Technology-Facilitated Process   An important and somewhat unique aspect of this simulation is that the "deliberations" are conducted on-line. ICONS has developed an Internet application (ICONSnet) that facilitates both asynchronous and synchronous (real-time) communication among participants, as well as research, amendment drafting, and voting from any computer with access to the World Wide Web.

There are certainly disadvantages to using an on-line forum instead of personal face-to-face communication. There is a learning curve for professors and students, although typically today's students are very familiar with the internet and its applications. In this simulation, much of the site maintenance is done by ICONS staff, and as such, professors and teaching assistants merely serve as moderators during deliberations. Also, on-line deliberations are not able to capture the exact nature of a committee hearing or floor debate within the Senate.[4] Body language, eye contact, and oral presentation are missing in web-based interactions.

---

[4] It is important not to idealize the personal communications within the U.S. Congress. Although most of us would like to believe that senators and representatives give one another their utmost attention and consideration, this is not usually the case. Indeed, we believe the on-line deliberations actually captured many aspects of the true nature of the Senate: students often talked over one another, failed to compromise, interrupted one another, and in some cases, failed to show up at all or to actively participate in the discussion.

That being said, the on-line nature of these deliberations has distinct advantages that we believe outweigh what some may consider the "artificial" nature of on-line communications. This platform helps to ensure that the simulation will be inclusive and student driven, one of the cornerstones of effective active-learning approaches. Students who may be too shy or introverted to participate in face-to-face interactions are more inclined to get involved in on-line communication (Carr, Cox, Eden and Hanslo 2004). The anonymity of the communication also mitigates traditional biases students may have (Kaufman 1998). Kaufman points out that on-line simulations rely exclusively on the written word, thereby enhancing reading, writing and critical thinking skills (1998, 63).

In addition, because the ICONSnet platform is operable and accessible any time, deliberations can and do continue long after class has ended for a day, allowing for a better representation of the relentless nature of legislative deliberations while freeing up in-class time to explore other topics of the course. Finally, because all discussions among teams take place on-line, there is a complete, archived transcript of all discussions and deliberation available following the conclusion of the exercise, enhancing student accountability as well as the opportunity for student reflection on "what happened" and why at the conclusion of the simulation.

The decision whether to use an on-line forum or face-to-face interactions should depend most of all on the simulation's objectives. If the objectives are to capture the essence of interpersonal communication between legislators, then it might be necessary to have students interact in person with one another. In this case, the main goals were to teach students about the politics of the legislative process, a goal which did not necessarily require in-person interactions.

The Assessment

Most studies on the effectiveness of simulations rely solely on student evaluations after the completion of the simulation and generally do not include a control group (but see Bernstein and Meizlish 2003). While these studies offer a glimpse at the effectiveness of simulations, we feel it is crucial to compare the group undergoing a simulation to a similar group undergoing a more traditional pedagogy in order to truly begin to assess the effectiveness of simulations.

We chose two classes of Introduction to American Politics at the University of Maryland, College Park. One class, which used a traditional lecture format, served as a "control" group, while the other class -- the experimental or treatment group -- utilized the simulation described above. The control group's pedagogy was traditional in the sense that it centered on lectures, written assignments, and several tests (four). There was no particular emphasis on any one topic within American government in the control group; the course for the experimental group was a similarly a survey of American government but had a strong emphasis on the legislative process and Congress during the simulation. It is important to point out that the experimental group also had lectures, and the simulation was meant to act as a supplement to traditional methods. Students in the experimental group had only one test, with the majority of their grade coming from assignments related to the simulation. Although it certainly varied by student, the time outside the classroom on the simulation versus studying for exams and writing papers was roughly equivalent between the two groups.

The design is "quasi" experimental rather than a pure experiment because we could not control the students' selection into the two groups (this is determined by the students and to an extent, the registrar) and because the control group is not exactly comparable to the experimental group. An ideal design might have split one class in half, giving one half the simulation

assignments and the other a separate assignment. There are obvious problems with such a design, and professors were not inclined to do this. It would also have been better if the same professor were teaching the same course during the same semester to two different classes – but this was not an option available to us, since professors in this department do not typically teach the same courses to different classes during the same semester.

Thus, we had two options available for conducting this assessment: use the same course taught by two different professors during the same semester or have a professor run the simulation during one semester, and then use a more traditional method during the next semester for the same course. We chose the former option because we believed it introduced less error. Timing was an important consideration – any difference between the two groups in the change in knowledge or attitudes might be due to current events instead of the simulation; to minimize this chance, we chose two courses taught at the same time. Further, scheduling courses was beyond our control, and it is not always the case that the same professor teaches the same class two semesters in a row – further increasing the amount of time for the study.[5]

Thus, the two courses were taught by different professors, but were taken during the same semester. Fortunately, the professors are quite similar – both are women, they have similar lecturing styles, and both have been teaching American politics at the university level for more than 20 years.   Similarly, the composition of the student body for each course was remarkably similar. Table 1 reveals the demographic data of both groups of students, with data on both the pre-simulation and post-simulation respondents. The control and subject groups are comparable on almost all dimensions. The simulation aspect of the course was not publicized prior to the

---

[5] Bernstein and Meizlish (2003) use a control group, but they too found it necessary to use a separate course rather to split the class into two groups. In their case, although the control and experimental groups are courses taught by the same professor, they avoid one problem, but introduce another – their control group took the class a full year before the experimental group participated in the simulation. Just as some of our effects may be attributable to different professors, theirs may be partly due to changes in the environment between 1997-1998 and 1998-1999.

semester, so student selection into one group or the other was primarily based on his or her own scheduling needs. The two groups are of similar size, and have the same structure (lecture twice weekly and discussion sections once a week).

[INSERT TABLE 1 HERE]

It should be noted that the number of students in both the control and subject groups decreased from the pre-test survey to the post-test survey, with the size of the control group shrinking from 211 students to 149. The subject group also shrank, but to a lesser degree, with a reduction from 212 respondents to 180. These reductions are partly due to students dropping the course over the semester, but also to the fact that some students skipped the last class of the semester (when the post-test survey was distributed and completed). Even so, the data in Table 1 indicate the composition within and between groups do not differ dramatically. That is, to the extent that certain students dropped or skipped the class, these were generally the same type of student in both groups, leaving the compositions still very similar.[6]

Students in both classes completed surveys with questions related to political knowledge and civic attitudes early in the semester — before the experimental group was introduced to the simulation – and again at the end of the semester, following the final simulation-related tasks were completed. Questions were drawn from a variety of surveys on political socialization. Changes in student responses from the pre-simulation survey to the post-simulation survey reveal how students' knowledge and attitudes change over the course of the semester-long class. We expect to find the following:

---

[6] To be clear, we might expect that students who dropped the course or skipped class would have different responses on knowledge and attitudes from those who do not drop out and who attend class; but, this would be responsible for changes *within* groups (from pre- to post-simulation). We are interested in changes *between* groups (control and experimental) and we would expect the students in the control group who drop out or skip class to be similar to those who do so in the treatment group.

H1: Students in both groups will show increases in political knowledge, yet, students

who participate in the simulation (the treatment group) will have a more improved

understanding of governmental processes, specifically the legislative process.

H2: Students in the treatment group will exhibit greater reductions in cynicism than their

peers in the control group.

We expect to see increases in knowledge of the legislative process both because students in the

experimental group because they have been engaged in an intensive hands-on activity, which

reinforces lectures and readings on this topic. As for cynicism, it is possible that as students

learn more about what goes on in Congress and get a chance to role-play, they may become *more*

disenchanted and *more* cynical. We, however, believe that students will gain a greater

appreciation for the difficulty involved in law making and all the considerations legislators must

keep in mind in making their decisions. This increased awareness will, we believe, serve to

diminish cynicism about the political process.

Findings

Political Knowledge   Table 2 shows the differences between the subject and control groups

before and after the simulation. As expected, there are few differences between the groups at the

beginning of the semester. The control group was slightly more knowledgeable about what

happens to most bills in the House and somewhat less knowledgeable about the primary purpose

of the Bill of Rights. Otherwise, there are no significant differences between the groups. The

pre-treatment results also indicate a relatively high level of knowledge in both groups, with the

lowest levels on the question about the legislative process, providing further support for an

increased emphasis on this aspect of American Government.

[INSERT TABLE 2 HERE]

Examining the post-treatment comparisons within groups, we see that knowledge increased on almost all questions in both groups. This should be expected, of course. It is somewhat disturbing to note that knowledge declined on some questions, but these drops are generally small. We come back to this later.

The data in this table reveal support for our hypothesis about political knowledge – students participating in the simulation were much more likely to correctly respond to the question on the legislative process. Not only did knowledge go up by 30 percent in the treatment group from pre- to post-treatment, but the post-treatment levels are significantly higher than those in the control group. While only 65 percent of those in the control group knew what happens to most bills in the House, 81 percent in the subject group knew this. Students in the treatment group were also more knowledgeable about the majority needed to override a presidential veto, another aspect of the legislative process.

We were disheartened to see that fewer students in the treatment group could correctly identify that each state has two senators and the drop in knowledge about the Supreme Court, especially considering the increase in knowledge on this question among the control group. The former finding raises questions about the impact of some of the liberties taken in the design of the simulation (that is, including only 15 Senators rather then two from each state could have misled students). The latter finding, on knowledge about the Supreme Court, could result from more coursetime being dedicated to Congress to the neglect of other material.

Political Attitudes   Table 3 shows the comparisons on a variety of political attitudes. We see again only slight differences between the groups in the pre-test survey. Looking within groups,

we find that on average, cynicism increased among the control group's students and, in contrast, decreased or stayed the same among the students in the treatment group.

[INSERT TABLE 3 HERE]

The post-treatment survey results indicate that students in the subject group were much less likely to agree that public officials are dishonest, with 34 percent of those in the control group agreeing versus only 18 percent in the treatment group. Similarly, at the end of the semester, students in the traditional course were more likely to say "public officials don't listen to people like me" than those in the class that participated in the simulation. And, students in the treatment group were less likely to believe that government is run by a few big interests than those in the control group.

Interestingly, despite the cynicism displayed on other questions, students in the control group were slightly more likely to believe they had a "pretty good understanding of the important political issues facing our country" than those in the treatment group. Both groups showed increases in confidence from the beginning to the end of the semester, but those involved in the simulation were a bit more tempered in their belief about understanding political issues. Perhaps this is because their experience "in" a senate office exposed them to the complexity inherent to most important issues.

The differing trends in student knowledge and attitudes between the two groups involved in this study lend support to our hypotheses about the expected impact of this Senate simulation. These data reveal only the short-term impact of the simulation and increases in political knowledge, in particular, are limited to the immediate content of the simulation (rather than increased knowledge of the government, writ large). Nonetheless, for those who have as goals

enhancing student learning about specific institutions or processes and decreasing cynicism about those institutions and processes, these findings do point to simulation as an effective tool. And, as discussed below, these findings on the impact of the simulation are further supported by qualitative data collected from those students who did participate in the simulation.

Student Reactions

The final stage in the simulation assignment was for students to write reaction papers. Although certainly anecdotal, we believe some direct comments from the students can illustrate both the strengths and weaknesses of this particular simulation, as well as other such activities. Most students believed they learned a great deal by participating in the simulation. One student said,

> I gained a much deeper understanding of the law making process from the ICONS Senate simulation. I always pictured law making as the result of the president meeting with a few of his elite officials and cabinet members…I now know that laws come into existence only as a result of much research and negotiation done by [the Senate].

Another said, "…the simulation proved the unpredictability of the lawmaking process and how outside factors such as bargaining and emotional appeals could drastically affect the outcome of legislation." One student concluded that "parties have the ability to dictate politics," a facet of the law-making process that may only become obvious if students actively engage in the process. And, one student said simply, "I feel that the ICONS simulation was a great way to help me to understand more fully the Senate process."

Some students commented on how their attitudes changed with regard to what elected officials do, and how they enjoyed the simulation more than traditional teaching methods. A student stated, "If ICONS is any indication of what it is actually like being a U.S. Senator, then

my respect level for our group of 100 elected officials just went way up. The ICONS project

was a challenging experience and to think that some men and women do this every day is

humbling." Another said,

> [The ICONS experience] allowed students to learn about the creation of
> legislation and the inner workings of Congress in a 'fun' way, and not simply by
> reading a textbook. It also allowed students to interact with each other in a role-
> playing environment, which is always a more interesting way to learn than a
> lecture is.

Some of the problems students had with the simulation related to working with a group

and the time outside of class they had to dedicate to this project, especially in the beginning of

the project. Many students would have preferred assignments based on individual work, rather

than having to depend on others to earn a good grade. We believe this is actually one of the

strengths of the simulation, even though all students do not enjoy it. Young people must learn to

work together to achieve a common goal, as this is a skill commonly required in the workplace

today and is essential to a democratic education. Others complained about the time it took

outside of class. Again, we were not surprised by this reaction. Students were held accountable

to one another, and some who may have tried to slide by in a traditional class were less able to

do so in a setting like this. Finally, although many students enjoyed the flexibility offered by the

on-line nature of the simulation, some believed it would have been more fun to have live

discussions. Very few students noted difficulties with using the on-line system, as most students

today are more comfortable using technology than are the professors.

Implications

We believe this study takes an important step in analyzing simulations and other non-

traditional pedagogies by comparing them against a traditional curriculum. Teachers generally

must weigh the costs associated with learning a new pedagogy and applying it to their class against the benefits to the students in terms of their knowledge gains. We believe our results show that simulations can be beneficial for teaching civic education, but that the objectives must be clearly outlined and the expectations should be reasonable. If the bar is set too high, then simulations and other similar pedagogies are unlikely to be seen as "worth it." Thus, if teachers expect that a single pedagogical technique will teach their students everything about a subject, or that students will automatically become less cynical and apathetic because of one experience, they will constantly be disappointed.

Yet, if teachers assess where they believe the major weaknesses lie in traditional curricula and adopt more interactive or experiential methods to fill these holes, we believe these tools can effectively supplement tradition pedagogy. The developers of this particular simulation saw that one of the hardest aspects of American government to effectively get across to students is the politics of the legislative process. Students are bored by the "how a bill becomes a law" lecture, and they hold very cynical attitudes about the motives of office holders and what goes into the decision-making process. A simulation can effectively teach students about the messy nature of this process, about how officials juggle competing priorities, and ultimately, how deliberation and debate are the foundation of any democracy. Students participating in this simulation gained considerable knowledge about the legislative process compared to their counterparts in the traditional course, and their levels of cynicism also declined.

This study certainly should not be the final word on the effectiveness of simulations for civic education. We examined political knowledge and cynicism, but there are several other important outcomes worth studying. Simulations may increase interest in politics, or the desire

for public service. Future studies might examine these and other outcomes. We believe scholars should continue to try to systematically compare these teaching methods against more traditional ones. Future research should focus on getting the best control groups possible so that practitioners can judge the true effectiveness of their efforts.

Figure 1. Committees and Topics of Bills for Consideration in ICONS Senate Simulation

Agriculture, Nutrition and Forestry Committee	Commerce, Science and Transportation Committee	Environment and Public Works Committee	Finance Committee	Health, Education, Labor and Pensions Committee
Forest Preservation	Stem Cell Research	Recycling Programs	Economic Stimulus	School Vouchers
Farm Subsidies	Cell Phone Usage and Rules	Open/Green Space Preservation	Aid to Terror Attack Victims	Pension Recovery
School Nutrition	NASA Funding	Nuclear Plant Protection	Social Security Privatization	Insurance for Prescription Drugs

Table 1. Comparative Demographic Data of Control Group and Subject Group

	Control Group (no simulation)		Subject Group (with simulation)	
	Pre-Simulation Respondents *n=211*	Post-Simulation Respondents *n=149**	Pre-Simulation Respondents *n=212*	Post-Simulation Respondents *n=180*
Gender				
Male	48.1%	51.0%	48.1%	51.7%
Female	51.9%	49.0%	51.9%	48.3%
Race				
White	65.7%	66.0%	67.5%	71.7%
Black	14.5%	14.6%	14.2%	12.1%
Latino/a	3.4%	2.8%	4.7%	4.6%
Asian/Pacific Islander	9.2%	9.0%	6.6%	8.7%
Native American	0.5%	0.7%	0.0%	0.0%
Other	6.3%	6.9%	6.6%	6.6%
Citizenship				
US citizen	95.3%	96%	93.6%	96.7%
Non-US citizen	4.7%	4.0%	6.4%	3.3%
Year in school				
Freshman	41.5%	42.3%	52.8%	52.5%
Sophomore	40.6%	35.6%	31.1%	31.8%
Junior	15.9%	19.5%	12.7%	11.2%
Senior	1.9%	2.7%	3.3%	4.5%
Major in school				
Political Science	24.8%	23.3%	17.0%	20.6%
Not Political Science	75.2%	76.7%	83.0%	79.4%

Table 2. Changes in Political Knowledge among Introduction to American Government Students

Question (correct answer)		Control Group[†]	Subject Group[†]
What happens to most bills that are introduced in the U.S. House? *(They are never sent by committee to the full House.)*	*Pre-Simulation*	.60	.51**
	Post-Simulation	.65	.81***
How much of a majority is required for the U.S. Senate and House to override a presidential veto? *(two-thirds [67%])*	*Pre-Simulation*	.79	.78
	Post-Simulation	.80	.85*
How many Senators does each state have in the United States Senate? *(two)*	*Pre-Simulation*	.83	.83
	Post-Simulation	.86	.82*
Which party has the most members in the House of Representatives? *(Republican)*	*Pre-Simulation*	.78	.83*
	Post-Simulation	.79	.79
Who has the final responsibility to decide if a law is constitutional? *(Supreme Court)*	*Pre-Simulation*	.79	.81
	Post-Simulation	.90	.77***
The primary purpose of the Bill of Rights was to ____ *(limit the power of the federal government.)*	*Pre-Simulation*	.80	.88***
	Post-Simulation	.92	.90
n	*Pre-Simulation*	210	212
	Post-Simulation	153	182

* *p* value < .05; ** *p* value < .01; ***p value < .001
[†] *Items in cells are the mean values within each category, or the percentage of students that answered each question correctly. P-values reflect the significance levels of results of t-test comparing differences between the control and subject groups both before and after the simulation.*

Table 3. Changes in Political Attitudes among Introduction to American Government Students

Statement		Control Group[†]	Subject Group[†]
Most public officials are dishonest.	Pre-Simulation	.27	.25
	Post-Simulation	.34	.18***
People like me don't have any say in what the government does.	Pre-Simulation	.22	.24
	Post-Simulation	.16	.15
Public officials don't listen to the people.	Pre-Simulation	.18	.17
	Post-Simulation	.29	.16***
Government is pretty much run by a few big interests looking out for themselves.	Pre-Simulation	.40	.32**
	Post-Simulation	.57	.31***
Senators are driven solely by their desire to be re-elected.	Pre-Simulation	.29	.32
	Post-Simulation	.37	.33
I feel I could do as good a job in public office as most other people.	Pre-Simulation	.64	.54**
	Post-Simulation	.55	.47
I feel I have a pretty good understanding of the important political issues facing our country.	Pre-Simulation	.60	.59
	Post-Simulation	.75	.67**
n	Pre-Simulation	211	212
	Post-Simulation	154	184

* *p* value < .05; ** *p* value < .01; ***p value < .001
[†] *Items in cells are the mean values within each category, comparing those who "agreed" or "strongly agreed" versus those who "disagreed" or "strongly disagreed." P-values reflect*
the significance levels of results of t-tests comparing differences between the control and subject groups both before and after the simulation.

References

Bennett, Stephen Earl and Linda L. M. Bennett. 2001. "What Political Scientists Should Know about the Survey of First-Year Students in 2000." *PS: Political Science and Politics* 34: 295-299.

Bennett, Stephen Earl. 1997. "Why Young Americans Hate Politics, and What We Should Do about It." *PS: Political Science and Politics* 30: 47-53.

Bernstein, Jeffrey L. and Deborah S. Meizlish. 2003. "Becoming Congress: A Longitudinal Study of the Civic Engagement Implications of a Classroom Simulation." *Simulation and Gaming* 34: 2: 198-219.

Brock, Kathy L. and Beverly J. Cameron. 1999. "Enlivening Political Science Courses with Kolb's Learning Preferences Model." *PS: Political Science and Politics* 32: 2: 251-256.

Carnegie Corporation of New York and Center for Information and Research on Civic Learning and Engagement. 2003. *The Civic Mission of Schools*. Available at http://www.civicyouth.org/research/areas/civicmissionofschools.htm.

Carr, Tony, Glenda Cox, Andrea Eden and Monique Hanslo. 2004. "From Peripheral to Full Participation in a Blended Trade Bargaining Simulation." *British Journal of Educational Technology* 35: 197-211.

Cammarano, Joseph and Linda L. Fowler. 1997. "Enhancing Citizenship through Active Learning: Simulations on the Policy Process." In *Education for Citizenship: Ideas and Innovations in Political Learning,* Grant Reeher and Joseph Cammarano, eds. New York: Rowman & Littlefield,101-120.

Denver, David and Gordon Hands. 1990. "Does Studying Politics Make a Difference? The Political Knowledge, Attitudes and Perceptions of School Students." *British Journal of Political Science* 20: 263-279.

Endersby, James W. and David J. Webber. 1995. "Iron Triangle Simulation: A Role-Playing Game for Undergraduates in Congress, Interest Groups, and Public Policy Classes." *PS: Political Science and Politics* 28: 3: 520-523.

Guetzkow, Harold S. 1962. "A Use of Simulation in the Study of Inter-National Relations." In *Simulations in Social Science*, edited by Harold Guetzkow. Englewood Cliffs, NJ: Prentice-Hall: 82–93.

Hibbing, John R. and Elizabeth Theiss-Morse. 1996, "Civics is not Enough: Teaching Barbarics in K-12." *PS: Political Science and Politics* 29: 57-62.

Kaufman, Joyce P. 1998. "Using Simulation as a Tool to Teach about International Negotiation." *International Negotiation* 3(1): 59-75.

Kille, Kent J. 2002. "Simulating the Creation of a New International Human Rights Treaty: Active Learning in the International Studies Classroom." *International Studies Perspectives* 3: 271-290.

Koch, Nadine S. 1991. "Winning Is Not the Only Thing 'On the Campaign Trail:' An Evaluation of a MicroComputer Campaign Simulation." *PS: Political Science and Politics* 24: 694-698.

Kuzma, Lynn M. 1998. "The World Wide Web and Active Learning in the International Relations Classroom." *PS: Political Science and Politics* 31.

Lantis, Jeffrey S. 1998. "Simulations and Experiential Learning in the International Relations Classroom." *International Negotiation* 3(1): 39-57.

Livingstone, David and Kenneth Lynch. 2000. "Group Project Work and Student Centered Active Learning: Two Different Experiences," *Studies in Higher Education* 25(3): 217-238.

Lutkus, A.D., A.R. Weiss, J.R. Campbell, J. Mazzeo, and S. Lazer. 1999. *The NAEP 1998 Civics Report Card for the Nation*, NCES 2000-457.

Macedo, Stephen. 2004. "Crafting Good Citizens," *Education Next* 4(2): 10-15.

Mann, Sheilah. 1999. "What the Survey of American College Freshmen Tells Us about Their Interest in Politics and Political Science." *PS: Political Science and Politics* 32: 263-268.

McIntosh, Daniel. 2001. "The Uses and Limits of the Model United Nations in an International Relations Classroom." *International Studies Perspectives* 2(3): 269-280.

Niemi, Richard and Jane Junn. 1998. *Civic Education: What Makes Students Learn*. New Haven, CT: Yale University Press.

Sorcinelli, Mary Deane. 1991. "Research Findings on the Seven Principles," In *Applying the Seven Principles for Good Practice in Undergraduate Education*, Arthur W. Chickering and Zelda F. Gamson, eds. San Francisco: Jossey-Bass.

Smith, Julia and Richard Niemi. 2001. "Learning History in School: The Impact of Course Work and Instructional Practices on Achievement." *Theory and Research in Social Education* 29: 18-42.

Torney-Purta, Judith. 1992. "Cognitive Representations of the International Political and Economic Systems in Adolescents," In Helen Haste and Judith Torney-Purta (eds). *The Development of Political Understanding*. San Francisco: Jossey-Bass.

Torney-Purta, Judith. 1998. "Evaluating Programs Designed to Teach International Content and Negotiation Skills." *International Negotiation* 3(1): 77-97.

Torney-Purta, Judith and Jo-Ann Amadeo. 2003. "A Cross-National Analysis of Political and

    Civic Involvement Among Adolescents." *PS: Political Science and Politics* 36(2): 269-74.

Vavrina, Vernon J. 1992. "From Poughkeepsie to Peoria to the Persian Gulf: A Novice's ICONS

    Odyssey." *PS: Political Science and Politics* 25(4): 700-702.

Vavrina, Vernon J. 1995. "Poughkeepsie to Persian Gulf Revisited: ICONS, the Internet, and

    Teaching International Politics." *PS: Political Science and Politics* 28(4): 725-728.