BECOMING A U.S. SENATOR IN AMERICAN GOVERNMENT:

THE EFFECTIVENESS OF AN ONLINE SIMULATION FOR CIVIC EDUCATION

J. Celeste Lay
&
Kathleen Young

University of Maryland

3140 Tydings Hall
College Park MD
301/405-8516
clay@gvpt.umd.edu
kyoung@gvpt.umd.edu

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The best way to sustain a healthy democracy is to instill in each new generation support for basic democratic principles, and a sense that one's participation and knowledge are necessary. There is mounting evidence, however, that such attitudes are absent among tomorrow's voters in the United States. Declining levels of civic participation within the student-aged population in the United States--in the form of voting as well as other forms of political and community engagement--have led many scholars to question the health and sustainability of democracy in the country. Similarly, data indicate American students today have less knowledge of, less interest in, and greater cynicism toward politics than the young people from just a generation before them.

These concerns have given rise to a renaissance of research in political socialization--the process by which young people develop their attitudes and behaviors toward politics and government (see Torney-Purta, Lehmann, Oswald and Schulz 2001; Galston 2001; Sherrod, Flanagan, and Youniss 2002; Gimpel, Lay and Schuknecht 2003). Schools, and specifically civic education, are thought to play an important role in fostering democratic values and teaching young people the skills necessary for participation. However, not only are civics requirements declining in both secondary and higher education, but students who take the courses 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.

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Many educators 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. High-school social studies teachers as well as social science professors are incorporating many forms of experiential learning into their classrooms, including internships, service-learning, independent research, as well as simulations and role-playing activities. Such non-traditional teaching methods are increasingly popular. But, 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), the precise nature of their effectiveness as tools for civic education remains under-examined (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, state-funded university. We present both pre- and post-simulation surveys of political knowledge and attitudes for both a control and experimental, subject group to evaluate the impact of the simulation. We also provide quantitative evidence of student reactions to the simulation experience. Together, these data reveal that simulation exercises like the one examined here are in fact a promising approach for instilling in today's youth an understanding and appreciation of political processes.

Political Knowledge, Engagement, and Civic Education

Political knowledge is one of the most important indicators of civic engagement, not only because it is relatively easy to measure but—more importantly—because individuals who are more knowledgeable about basic fundamental concepts and events in U.S. history and government are more efficacious, more participatory, and generally less cynical about politicians

(Delli Carpini and Keeter 1996). That is, those individuals with greater levels of political knowledge are also more likely to be engaged citizens, which are essential to the proper functioning of democratic systems. Given this relationship between knowledge and engagement, findings from a 1998 National Assessment of Educational Progress (NAEP) by the U.S. Department of Education in the field of civics sounded a loud warning to those concerned about future citizen participation. This assessment 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).

At the same time that knowledge levels are low, American young adults are also less likely than any generation before them to vote in presidential elections or to believe that keeping up with political developments is important (Galston 2001). In the late 1990s and 2000, only 16 percent of incoming college freshmen said that they discuss politics, while in 1968-1970, almost twice this proportion of young people discussed politics with others (HERI).

Many scholars are quick to point out that although young people may be less interested in traditional methods of political expression and participation, they do care about the world around them and the policies that affect it. They point to adolescents' high levels of community activism and volunteer service, and their tolerance for alternative lifestyles and cultures, as evidence that it is not the case that this generation has dropped out of the political world (Fields 2002). However, these modes of engagement--the political and the civic--are distinct for most Americans, and even more so among 15-25 year olds; that is, only 16 percent of Americans are

active in *both* the political and civic realms and even fewer, 11 percent, of young people are dual activists (Keeter, Zukin, Andolina and Jenkins 2002).

Secondary schools and universities can be an important part of helping to find ways to merge youths' interests in communities and volunteering with traditional political methods of participation. Schools are not the sole vehicle of civic education in the United States (Macedo 2004). The attitudes and behaviors of tomorrow's voters will be shaped by their families, their communities, their individual experiences, events in the world around them, and the way these events are depicted in mass media. "Nevertheless," Macedo notes, "the best available evidence suggests that teaching students about current events, the political process, and how to get involved can make them more willing and able to practice good citizenship" (2004, 12).

In 2003, concerned educators and scholars issued a report, *The Civic Mission of Schools*, in which they outlined some "promising approaches" for civic education. The authors of the report specifically state that they do not recommend reviving traditional civics classes in which students are taught only "rote facts about dry procedures." Torney-Purta echoes these sentiments about encouraging youth engagement, noting "Simply requiring more hours of the same kind of instruction is unlikely to be an adequate solution… Schools need to go beyond the transmission of knowledge to foster skills of citizen involvement among all students" (1999, 6). Gibson argues that educators need to learn from past mistakes and encourages new models of civics education to focus on methods of active and experiential learning in order to foster in students a greater appreciation of the relevance of the dynamics of political processes (2001). One of these promising approaches is to "encourage students' participation in simulations of democratic processes and procedures" (Carnegie/CIRCLE 2003, 6).

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 (Kaufman 1998).[2] Their positive effects have been documented in several studies (see, for instance, Bruner 1963; Chesler and Fox 1966; Taylor and Walford 1972; Brandhorst 1990). Simulations have been found to benefit students with differing learning styles (Halpern et al. 1994; Merryfield and Remy 1995; Brock and Cameron 1999) and to engage students in the material in ways that a traditional lecture/textbook method cannot (Stover 1985; McIntosh 2001; Kille 2002). Simulations have been found to be effective tools for both content learning (increasing declarative knowledge) and skill development (enhancing procedural knowledge) (Lantis 1998), as well as means of encouraging both higher-order learning and appreciation for situational complexities (Torney-Purta 1992). They provide a change of pace in the classroom, promote student participation and interaction, and encourage student creativity (Shaw 2004). As Hershey points out, simulations should not be seen as a replacement for lectures, as students often need the types of broad background and context provided in a lecture if a simulation experience is expected to achieve its goals. Rather, they are supplements to more traditional teaching methods. Simulations prove to be memorable learning experiences that allow students to better retain the material of a course (1999; see also Linser and Naidu 1999).

Simulations are especially well suited to enhance students' civic character, as they facilitate learning about the nuances of complex, contentious issues and about the fact "their own activity or inactivity could have significant consequences on the output of the policy process" (Cammarano and Fowler 1997, 106). Simulations serve to demystify the theoretical concept of a

[2] See Guetzkow (1962) for one of the earliest uses of simulations in political-science teaching. Guetzkow's work focused on international relations, rather than on American political processes.

government "by the people, for the people" to demonstrate to students how individuals affect and are affected by decision processes.

Role-playing provides students "a unique insight into the world of decision-making that cannot be replicated by any other teaching situation" (Poutsie 2001, 333). The traditional lecture format in American politics courses is

> not 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).

Hibbing and Theiss-Morse argue that good citizens only emerge when individuals have a true appreciation for the sometimes-messy workings of democracy (1996). They argue that 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—tend to "recoil from what democracy looks like when seen in action and sometimes in inaction" (1996, 62). This, in turn, encourages the cynicism common in society about the functioning of the government. A simulation-based approach to teaching about democratic processes, which exposes students to the types of conflicts that are at the very heart of the democratic process and are part and parcel of institutions that value both liberty and diversity, should serve to heighten their appreciation for the complexities of these processes and institutions and, in turn, minimize some of the cynicism and doubts they have about the effectiveness and appropriateness of the American political system.

Indeed, one of the chief complaints from students is that civics instruction is boring. Niemi and Junn point out, "…certain kinds of teaching methods can significantly add to or detract from learning about government and politics" (1998, 81) and argue that the more that

teachers utilize interactive methods in lieu of test-taking, memorization and lecturing, the more knowledgeable students are. 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, as all reported the activity to be very helpful in teaching about the content of the course and all encouraged the simulation to be adopted in future semesters (1991).

While there is evidence of a groundswell of support for the use of simulations as a tool for civic education, this support remains tempered. Much of the evidence related to the effectiveness of simulations as a civic-education teaching tool is anecdotal and concerns remain that experiential teaching methods like simulations are just another in a long-line of "teaching fads" that, in practice, provide students with limited benefits. We argue that well-designed simulations are valuable teaching tools, especially in the realm of civic education. This study goes beyond anecdotal reports of student reaction to simulation experiences 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 the simulation exercise described below.

While we expect that all students of American government will demonstrate increased levels of political knowledge and changed attitudes following their experience in a semester-long course focused on American politics, we hypothesize that those students who participated in the simulation will demonstrate more significant gains in knowledge related to the substance of the simulation—here, the workings of the U.S. Senate and senators—and more significant reductions in levels of cynicism toward U.S. political institutions and officials compared to students whose American politics course involved no similar experiential component.

The Simulation

The simulation under consideration in this research puts students in the middle of the law-making process in the United States 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. The simulation was developed by the International Communication and Negotiation Simulation (ICONS) Project at the University of Maryland, which has more than twenty years of experience in developing and running simulations intended to provide both high-school and university students with an enhanced understanding of the dynamics and complexities of the international system and how these realities complicate the process of foreign-policy making. Teachers and professors who have incorporated ICONS simulations into their courses and who have analyzed simulation effects view these exercises as effective and appropriate activities for students that succeed in helping students to achieve associated learning objectives in an innovative way (Torney-Purta 1992, 1998; Vavrina 1992, 1995; Kaufman 1998; Kuzma 1998).

Simulation Overview

Following on this success in the field of international relations, the ICONS Project recently expanded its mission to include the development and administration of simulations intended to improve student understanding of American government processes. With the assistance of a Robert H. Michel Civic Education Grant from the Dirksen Congressional Center, ICONS developed a simulation of the legislative process in the U.S. Senate.[3] In this condensed

[3] The ICONS Project would like to thank David Armstrong and Charles Jardines for their efforts in the development phase of this simulation.

[4] each of whom is a member of (at least) two of five committees. The committees included in the simulation are: Finance; Environment and Public Works; Commerce, Science, and Transportation; Health, Education, Labor, and Pensions; and Agriculture, Nutrition, and Forestry.

Torney-Purta and Amadeo (2003) note that civic-education activities and exercises need to be designed with particular learning objectives in mind, that no single exercise can or should be expected to demonstrate to students all there is to know about the U.S. political and civil society. The structure of this simulation reflects ICONS's goal to create an activity that increases student understandings of the nuances of the legislative process and the pressures faced by elected officials. It was because of these goals that the simulation focuses primarily (although not exclusively) upon the legislative work that occurs at the committee level. This was also the impetus behind the decision to have students to grapple with a variety of pieces of legislation simultaneously. In addition, the material provided to each participant about the background, interests and constituents of each Senator is intended to encourage a heightened appreciation of the difficulty officials face in setting and pursuing legislative priorities, especially in the face of colleagues' competing priorities.

Students who participate in the simulation are informed (in written materials) that there are 3 weeks left in the current congressional session and that each committee is currently considering three distinct bills to determine whether they should be reported out for a vote of the full Senate. The text of these bills is pre-determined and relate to issues ranging from school vouchers to tax

[4] While the actual names of the senators included in this simulation would not sound familiar to students or their professors, these roles have been created on loose adaptations of recent and current senators. Senators whose roles the students will be filling were not drawn at random. They were chosen by using a popular measure of partisanship called NOMINATE scores, calculated using roll call votes. The senators included represent the entire range of nominate scores. The actual names of the senators, though, have been changed so that students will not just look at the vote history of the Senator they represent to determine his/her agenda.

reforms to agricultural subsidies and beyond. As stated in the Scenario for this simulation (provided to each participating student):

> The senators on these five committees, and the staffers who work for them, are currently focused on trying to ensure that those bills of the most importance to them make it through the mark-up process, are approved by their respective committees, and make it to floor for a vote before the session ends.

There are three phases of this simulation, as displayed in Figure 1. In the first phase, senators in each committee debate and negotiate with one another about the merits of each bill and propose specific amendments to each. Phase 1 concludes with committee members voting on each of those amendments put forth. Phase 2 involves additional discussions among Senators, 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, it 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, and the simulation concludes with the final votes of the full Senate.

[Figure 1 here]

In addition to the basic scenario and outline of this exercise, ICONS provides student participants with background material on each Senator (brief biographies, information about when they were last elected and with what margin of victory, background on the demographics of the state they represent, and a review of those groups or individuals who have made the largest financial contributions to their campaigns). The ICONS simulation material also includes extensive reference material to help the students learn more about the substance of the bills under consideration so that the students can be more comfortable and confident in their discussions of the details of the proposed legislation. It should be noted: There is no pre-scripted outcome to

this simulation. It is the students who determine the exact content of bills following the amendment process, and it is the votes of the students that determine which, if any, bills are considered by the full Senate.

This simulation was designed to be incorporated into American politics courses at either the high-school or the university level (different assignments are suggested given the educational level of the participants). While an instructor could run the simulation for as much or as little time as they choose to dedicate to it, ICONS recommends that the simulation runs for a minimum of three weeks, following a period of research in which students become familiar with the Senators, issues and the legislative process in general. Students are informed that instructors can and will monitor all online deliberations and are available to answer questions both of process and substance for their participating students.[5]

A Web-Based Simulation

One of the distinguishing characteristics of all ICONS exercises, including its Senate process simulation, is that the exercises are designed as web-based simulations. ICONS has developed an Internet application (ICONSnet) that facilitates both asynchronous and synchronous (real-time) communication among participants, research, amendment drafting, and voting from any computer with access to the World Wide Web. In other words, ICONSnet provides "a space in which students playing roles connect to each other and generate the simulation activity in the field being learned"—here, American government (Linsner and Naida 1999).[6]

[5] In the running of the simulation under consideration here, graduate teaching assistants from the Department of Government and Politics as the University of Maryland served as the on-line monitors of the simulation.
[6] For samples of the ICONSnet interface, see the sample communities accessible through www.icons.umd.edu.

While there can be drawbacks to employing technology as the vehicle for delivering this exercise—including instructor fear of technology and a shortage of appropriate hardware—analyses of these simulations reveal that the web-based platform is an asset for conducting simulations (Kaufman 1998). This platform helps to ensure that the simulation will be student driven, one of the cornerstones of effective active-learning approaches. Per Kuzma, "the web is an educational tool that is uniquely situated to advance student-centered learning and develop student's cognitive skills" (1998).

In addition, because the ICONSnet platform is operable and accessible 24 hours a day, 7 days a week, the exercise can continue long after class has ended for a day. In addition, the Web-based interface reinforces the role-play element of the exercise: Students receive messages from Senator Baker, for instance, or her legislative assistant. While they know that these messages were sent by another student in their class, the nature of this interaction encourages students to behave more professionally and to treat the other teams as Senators and their staffs rather than as other 18- to 21-year olds working from their dorm rooms.

Finally, because all discussions among teams take place on-line, there is a complete, archived transcript of all discussions and deliberation available to both instructors and participants following the conclusion of the exercise. This helps to hold students accountable for what they have said or promised throughout the course of a simulation but is also invaluable for instructors who want to be able to track and point to pivotal points in the process when they are conducting a post-simulation debriefing with students.

A Group-Based Approach

Another distinguishing characteristic of ICONS simulations is that they are designed with the expectation that each role in a simulation (be it a country or a Senator) would be "played" not by a single individual but, rather, by a collection of students. This structure increases opportunities for peer-to-peer learning and encourages the emergence of collaborative approaches of decision-making and problem-solving. The Senate simulation is no exception.

A unique feature of this simulation is that ICONS provides explicit guidelines for how instructors can structure the Senate-groups. Livingstone and Lynch have found that structured group work, in which each student in a group has a clear identity and set of responsibilities, is the more effective approach to group work (2000). They not only found that this structured approach leads to less tension among student groups but also that, in these situations, students seem to be better able to evaluate the overall project and its effects.

The Instructor's Guide provided with this simulation recommends that Senate-groups be structured as if they were Senate offices on Capital Hill. That is, each student group should include (as class enrollment allows) a Senator, a Chief of Staff, a Legislative Director, Legislative Assistants, and a Communications Director.[7] Each position has discrete tasks—ranging from casting votes for the Senator to drafting press releases—but the groups must coordinate their efforts and have open lines of communication within them in order for the group to successfully pursue its legislative agenda. This feature of the Senate simulation goes far to help students understand the true workings of the legislative process, impressing upon them the idea that the elected officials are really only one group who influence the shape of the legislation that emerges from the process.

In the running of the simulation analyzed below, students participated in the three-phases of the simulation over the course of 4 weeks. Prior to beginning the online exchanges with other

[7] The running of the simulations evaluated in this paper does adopt this structuring of group teams.

Senate-teams, students spent approximately 3 weeks preparing for the simulation, conducting research on the issues under consideration, formulating legislative agendas and strategies, and completing a group "briefing paper" in which they were required to propose and justify their Senator's legislative agenda and to present any and all amendments that they planned to propose during the course of legislative deliberations. Almost all of the simulation work was conducted out of class time and, throughout the simulation activity, students continued to cover new material during their regular lecture time.

Implementing the Assessment

In order to assess the effectiveness of this simulation, we employ a survey-based, quasi-experimental methodology. We use surveys to assess changes in our educational objectives. We chose two classes of Government and Politics (GVPT) 170: Introduction to American Politics at the University of Maryland, College Park for several reasons. First, we chose to use two classes because one serves as a control group, which used a traditional lecture format, and the other serves as the subject group, which utilized the simulation. The ideal design would have halved the students in the same class, thus controlling for any other differences besides the simulation. However, it would be incredibly impractical (and unethical) for a professor to divide her class in half, and ask one-half of the class to participate in an extensive project while the other half does not have to participate.[8] Thus, we use a second-best design, in which two separate courses covering the same material and taught at the same time are used. Because we could not control the students' selection into the two groups, the design is "quasi" experimental rather than a pure experiment. Most studies on the effectiveness of simulations do not include any type of control

[8] Even if half of the students were given an alternative assignment of equal difficulty and time, this would not be considered a "traditional" lecture format in which to compare the groups.

group and instead rely solely on student evaluations after the completion of the simulation. In order to truly understand the effectiveness of simulations vis-à-vis traditional pedagogy, we need data from comparable groups.

Student Sample

Table 1 reveals self-reported demographic data of both the control group and the subject group of students. These two groups appear to be comparable on almost all dimensions. Both groups draw from the same population. Because the course fulfills a university core-requirement, it draws students who may not be particularly interested in politics, as well as those who plan to become GVPT majors. Most of the students are at the beginning of their college careers, and many are first-semester freshmen. Their selection into one of the two groups could not have been based on much more than scheduling requirements, because most would not have known about professorial differences, and the simulation aspect of the course was not publicized prior to the semester. This makes their selection into one of the two groups practically random. Almost fifty-two percent of the students in each class are female, and roughly two-thirds of them in each class are white, while another 14% are black. There are slightly more U.S. citizens in the control-group class, but the difference between the classes is not significant. The experimental group does have a significantly higher percentage of freshmen than does the control group, while the control group includes a significantly higher percentage of political science majors. Aside from these considerations, though, the groups are nearly identical.

[Table 1 here]

The two groups are of similar size, about 225 students per class, and have the same structure – a meeting in a lecture-hall with the professor twice a week and a weekly 50-minute discussion

section with a graduate teaching assistant (TA). In order to control for external events that might alter student attitudes, we chose courses taught during the same semester.[9] Because of the simulation, the experimental group had a slightly different assessment procedure (a final exam, weekly quizzes, short writing assignments, and individual and group assignments related to the simulation) compared to the more traditional methods of the control group (exams, individual reflection papers and a research paper). But indeed, we would expect professors to make some accommodations in their assessment procedures for the simulation and this would go into our evaluations of the overall its effectiveness. Not only are the students in the groups very similar, but the professors are also quite similar – both are women, both lean politically to the left, they have similar lecturing styles that involve students to a great extent, and both have been teaching American politics at the university level for more than 20 years.

We chose to use the simulation in an introductory course in American politics rather than a more advanced course in Congress or the Legislative Process not because the simulation could not be useful in advanced courses, but largely because an introductory course provides the most opportunity to reach students that are peripherally interested in politics, whereas students in an advanced course are generally political science majors who are already very interested in politics, very knowledgeable and generally quite participatory and efficacious. Hershey notes that today's freshmen are more likely than ever to be "less interested in politics, less knowledgeable about public affairs, and less blessed with the academic skills we associate with the ability to thrive in political science courses;" as such, she argues that innovative teaching approaches like simulations are most appropriate for an introductory course as "it provides an

[9] Bernstein and Meizlish (2003) use a control group in their assessment of a legislative simulation, but they too found it necessary to use a separate course rather to split the class into two groups. In their case, 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 or assignments, theirs may be partly due to changes in the environment between 1997-1998 and 1998-1999

opportunity … to help them see the fascination of politics and power" and to get a true understanding of what democracy looks like in action (1999). It also provides an appropriate testing arena for the effectiveness of this simulation as a tool for civic education.

An introductory course could potentially have significant influence over later political attitudes and behavior, as it has been established that although a great deal of political learning takes place during childhood, the period of late-adolescence is an important one for most individuals in solidifying and coming to understand their beliefs (Alwin and Krosnick 1991; Astin, Sax and Avalos 1999). Because we are interested in the effectiveness of simulations not just in teaching about negotiation and the political process, but for their value in civic education, we chose courses where civic education is most important.

The Survey

The pre-simulation and post-simulation surveys were designed to measure our main points of interest related to democratic values: general political knowledge and attitudes toward the political process of the United States. We expect that students in both groups would increase in knowledge, efficacy (or confidence about their understanding and ability to impact democratic processes), and interest. After all, we would expect that even a traditional lecture format would teach students more than they already know about how the government works, which would in turn, increase students' levels of efficacy and pique their interest. Yet, we expect students who participate in the simulation to demonstrate significantly greater gains in understanding of governmental processes, particularly those of the legislative branch of the federal government, and to demonstrate a significant reduction in cynicism after experiencing first-hand the complexity of the decision-making process.

The anonymous pre-test survey was distributed in-person in both classes during the third week of the fall semester, approximately six weeks before the simulation began in the subject group and long before either class had begun to cover any of the institutions in American government. Post-test surveys, which included the same questions as the pre-test surveys, were administered in the closing weeks of each course.[10] By comparing responses to pre- and post-simulation questions, we are able to measure changes within each of the two groups. More than 400 students completed the pre-test survey, and 332 completed the post-test survey.

The pre-test surveys administered to both groups were identical, while the post-simulation survey for the subject group included an additional, final set of questions related to their reaction to the simulation experience. In the pre- and post-tests, two versions of the survey were administered to each group; each version had a different ordering of questions within the survey sections. A comparison of responses shows no question-order effect among the two versions of the surveys for either the control or subject group. It took an average of 10 minutes each for students to complete the pre-test and post-test surveys, which were administered during lecture sessions of each course.

Findings

The data from this series of surveys among introduction to American Government students provide insights into the effects of an educational simulation exercise like the ICONS Project's Senate simulation.[11] The findings presented below demonstrate distinct patterns of

[10] The control group took the pre-test on September 22, 2003 and the subject group took the test on September 25, 2003. The post-tests were administered on December 3, 2002 (control group) and December 9, 2003 (subject group) respectively.

[11] The authors would like to thank Jim Gimpel for his help in compiling the survey data.

changes in political knowledge and in political attitudes between the two sets of students examined.

Changes in Political Knowledge

In both the pre- and post-simulation surveys, students were asked a series of multiple-choice questions that tested their levels of knowledge about the American political system and its workings. As the data in Table 2 indicate, pre-simulation survey results demonstrate, knowledge scores among these students were relatively high, especially when compared to findings from the 1998 NAEP civics assessment, for instance. For all but one question, more than three-fourths of students in both the control group and the subject group answered the questions correctly. These students generally had high levels of political knowledge before their American government courses but, as the post-simulation data indicate, their semester-long course in American government did affect their political knowledge. With regards to the focus of this study, these data also demonstrate that students in the subject group and the control group had different experiences.

[Table 2 here]

Despite their already-high levels of knowledge, students involved in the Senate simulation showed significant knowledge increases in areas related to the legislative process. The question that displayed the most dramatic change among students in the subject group was that most closely related to the simulation activity—the fate of most bills introduced into the U.S. Congress. In the pre-test survey, only 51.4% of subject-group respondents correctly answered that most bills are never reported out of committee. After the simulation experience, 81.3% of these students answered this question correctly, and the difference between these rates

of correct response is significant at the .001 level. In their own simulation, less than half of the 15 bills under consideration were reported out to the "full" Senate by the respective committee, and one committee failed to report out any of the three bills it was considering. The students' experiences trying to navigate legislation through the Senate committee process helped them to understand that it is rare for a bill to follow an easy road to consideration of the full Senate and that it is even rarer for a bill to go on to be enacted as legislation. In comparison, more students in the control group answered this question correctly in the post-test survey than in the pre-test survey (59.7% versus 65.1%), but the increase in knowledge on this issue was far smaller, and there was not a significant difference in the percentage of control-group students who responded correctly in the pre- and post-test surveys. Similarly, students in the subject group were significantly more likely to know after the simulation that a two-thirds vote of Congress is needed to override a presidential veto. The control group showed no significant increase in correct responses to this question.

It is important to note that students in the control group *did* show significant knowledge gains in other areas: For instance, students in this group were significantly more likely to know that the primary purpose of the Bill of Rights was to limit the power of the federal government in the post-test than they were in the pre-test survey. No significant gains in this area—which would not have been illustrated by the simulation experience—were demonstrated among the subject group.

Interestingly, students who participated in the simulation did *not* demonstrate significant knowledge gains in questions related to the number of Senators per states and to which party controls the House of Representations (as of Fall 2003). This non-finding demonstrates some of the limits of simulation activities. The ICONS Senate simulation does not recreate the full

legislative process for students; for instance, it only includes 15 Senators, and no two Senators in the simulation are from the same state. As such, if this simulation was a student's only exposure to legislative structures, it might not be clear to the student that, in fact, every state has two Senators, regardless of the size of state population. Whereas simulations are useful to enhance student understanding of the nuances of processes, more traditional methods of teaching remain crucial to conveying to students basic background information.

Changes in Political Attitudes

Pre-test data from students in both the control and subject groups on political attitudes, displayed in Table 3, demonstrate that students in each of these groups had comparable attitudes toward American political institutions and the officials that functions within these institutions. About one-quarter of respondents in each group agreed with the statement that most public officials are dishonest, and just over 20% of each sample indicated that "people like them" don't have any say in what the government does. Similarly, 18% of each sample agreed that public officials don't listen to the people that they are supposed to represent.

[Table 3 here]

When the post-test data is examined, however, we see that different dynamics have emerged between the two groups. Whereas cynicism about the workings of U.S. democracy has increased in some ways among students in the control group, students who participated in the simulation demonstrate a greater belief in the working of U.S. institutions and the role that the public plays in shaping governmental decisions. This finding is especially interesting since the simulation structure does not emphasize the role of the public in the legislative process. Senator-teams are provided with background on the demographics of their state-wide constituencies and

are reminded that this is the population that has elected them, but they receive no direct messages or information from constituent groups or individual constituents. Nonetheless, whereas students in the control group showed a significant *increase* in the percentage of students who believed that public officials do not listen to people and a significant and sizable *increase* in the percentage of students who believe that "government is pretty much run by a few interests" (39.8% of control-group students agreed with this statement in the pre-test survey, while 57.1% agreed with the statement at the end of the semester), students participating in an elite-focused simulation showed no such increase.

Rather, subject-group students were significantly *less* likely—following the simulation experience—to believe that people like them had no say in political processes. In addition, data indicate that these students were significantly less likely to agree with the statement that "most public officials are dishonest" in their post-simulation surveys. Within the control group, however, post-test respondents were more likely (although not significantly more likely) to agree that public officials are dishonest.

The increased levels of efficacy and decreased sense of cynicism among simulation participants indicate that simulation activity like the ICONS Senate simulation is not just an effective tool for conveying information about the workings and process of the federal legislature but for encouraging students to think about these processes and the factors that influence them in new ways. Further, the combined effect of increased political knowledge, increased levels of efficacy, and decreased cynicism could likely foster a new sense of civic engagement among simulation participants. As such, it seems a most effective tool for civic education.

Student Reaction to the Simulation

The above data support our hypotheses regarding the effectiveness of a Senate simulation as a teaching tool in introductory American political courses at the university level. A more complete understanding of the effect and effectiveness of the simulation is available by reviewing feedback on the simulation experience provided by participants. As noted in Table 4, of the 183 participating students, 75% indicated that the simulation was a useful learning tool and 65% said that that the simulation helped them to learn more about politics in particular. Sixty-two percent agreed that the simulation was a realistic (albeit partial) portrayal of the U.S. Senate, and 59% stated that the simulation made this introductory course more interesting overall. Much of the literature on simulations uses these type of data exclusively, but they are more convincing when added to the findings on how simulations affect the skills and attitudes of participants.

[Insert Table 4 here]

While a vast majority of students agreed that the simulation was an effective and useful exercise in the class, only about 40% of students said that the simulation was "enjoyable." Discussions with the instructor and teaching assistants for the subject-group class indicate that this relatively low rate of "enjoyment" were likely the result of two factors: First, the simulation required a lot of work. Prior to the three weeks of online negotiation, senator-teams had to research a range of issues and devise strategies for pursuing their interests. Each team had to write a paper in which they presented their plan for the simulated deliberations as well. And, once the simulation began, students were expected to log in daily to monitor messages, respond to queries from other senator-teams, lobby for support for their bills and amendments, and so on. Any assignment that requires such ongoing involvement from students might rank low in levels of student enjoyment. Furthermore, and perhaps more importantly, students found the group-

work aspect of the simulation exercise to be challenging and sometimes even frustrating. Effective teams had to dedicate much time to coordination and required that all team-members do they job with which they were tasked. As often happens with group projects, there were disagreements among teams about how to proceed, and challenges arose when some team members produced work others considered to be sub-par. This no doubt contributed to students' reluctance to say that the enjoyed the simulation. But it is a testimony to the activity that, even though the majority of students did not enjoy it, they still recognized it as useful and effective.

Conclusions

Taken together, the findings presented here support the proposition put forth in the *Civic Mission of Schools* report that simulations are a promising approach in civic education. Not only did the ICONS Senate simulation help to ensure that students of American government understood the nuances of legislative processes but it also encouraged them to reconsider their attitudes toward U.S. political institutions. It is clear that students of American government who did *not* participate in an experiential program like this simulation did have some increased levels of political knowledge. However, these students showed *increased* levels of cynicism and no increases in feelings of efficacy. Students who participated in the simulation, however, did show the types of attitudinal changes that are associated with enhanced levels of civic engagement. Further research is needed to determine whether the changes in knowledge and attitude that characterize the subject group are lasting and whether, in fact, students with this type of training view their role as citizens in a different way than others in the future. In the short-term, however, this study demonstrates that educators and officials interested in bolstering civic

education should give greater consideration to the role that simulations can play toward improving civic education at all levels.

Figure 1. Simulation Phases

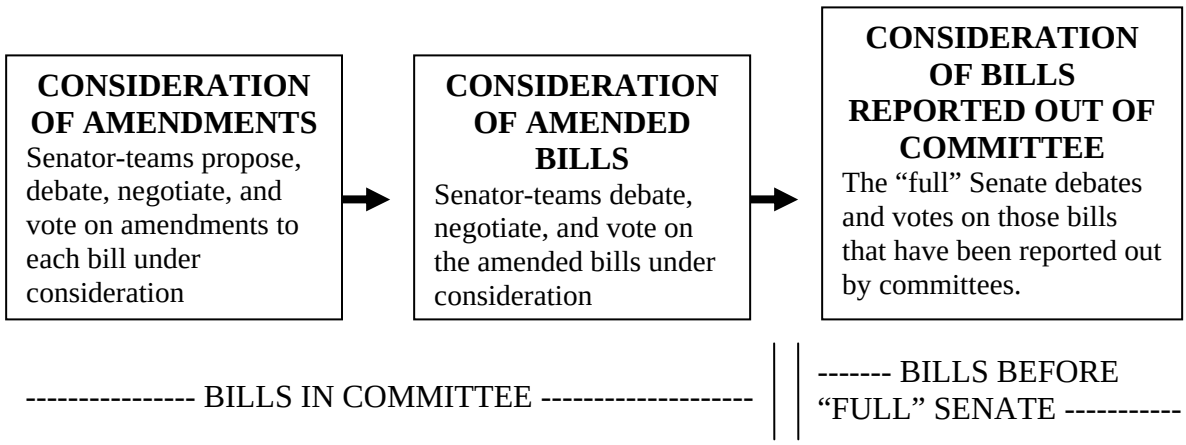

Table 1. Comparative Demographic Data of Control Group and Subject Group

	Control Group *(no simulation)* *n=211*	Subject Group *(simulation)* *n=212*
Gender		
Male	48.1%	48.1%
Female	51.9%	51.9%
Race		
White	65.7%	67.5%
Black	14.5%	14.2%
Latino/a	3.4%	4.7%
Asian/pacific islander	9.2%	6.6%
Native American	0.5%	0.0%
Other	6.3%	6.6%
Citizenship		
US citizen	95.3%	93.6%
Non-US citizen	4.7%	6.4%
year in school		
Freshman	41.5%	52.8%
Sophomore	40.6%	31.1%
Junior	15.9%	12.7%
Senior	1.9%	3.3%
major in school		
Political Science	24.8%	17.0%
Not Political Science	75.2%	83.0%

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*	59.7%	51.4%
	Post-Simulation	65.1%	81.3%***
How much of a majority is required for the U.S. Senate and House to override a presidential veto? *(two-thirds [67%])*	*Pre-Simulation*	78.6%	77.8%
	Post-Simulation	80.3%	84.5%*
How many Senators does each state have in the United States Senate? *(two)*	*Pre-Simulation*	82.9%	83.2%
	Post-Simulation	86.3%	81.9%
Which party has the most members in the House of Representatives? (*Republican)*	*Pre-Simulation*	77.7%	82.5%
	Post-Simulation	79.1%	79.1%
Who has the final responsibility to decide if a law is constitutional? (*Supreme Court)*	*Pre-Simulation*	78.7%	81.1%
	Post-Simulation	89.6%**	77.5%
The primary purpose of the Bill of Rights was to ____ (*limit the power of the federal government.)*	*Pre-Simulation*	80.0%	88.2%
	Post-Simulation	91.1%**	89.9%
n	*Pre-Simulation*	210	212
	Post-Simulation	153	179

* *p* value < .05; ** *p* value < .01; ***p value < .001

† *Items in cells are the percentages of students within each category that answered each question correctly. P-values reflect the significance levels of results of chi-square tests comparing changes from the pre-simulation survey to the post-simulation survey in the percentage of students within each of the groups that responded to the above questions correctly.*

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

Statement		Control Group†	Subject Group†
Most public officials are dishonest.	*Pre-Simulation*	26.5%	25.5%
	Post-Simulation	33.8%	17.9%*
People like me don't have any say in what the government does.	*Pre-Simulation*	21.8%	23.6%
	Post-Simulation	16.2%	14.7%**
Public officials don't listen to the people.	*Pre-Simulation*	18.0%	17.5%
	Post-Simulation	28.6%*	16.3%
Government is pretty much run by a few big interests looking out for themselves.	*Pre-Simulation*	39.8%	32.1%
	Post-Simulation	57.1%***	31.0%
Senators are driven solely by their desire to be re-elected.	*Pre-Simulation*	29.4%	31.6%
	Post-Simulation	37.0%	33.2%
I feel I could do as good a job in public office as most other people.	*Pre-Simulation*	63.5%	54.2%
	Post-Simulation	55.2%	47.0%
I feel I have a pretty good understanding of the important political issues facing our country.	*Pre-Simulation*	59.7%	59.0%
	Post-Simulation	74.7%**	66.8%*
n	*Pre-Simulation*	211	212
	Post-Simulation	154	179

* p value < .05; ** p value < .01; ***p value < .001

† *Items in cells are the percentages of students within each category that reported that they "agree" or "strongly agree" with each statement. P-values reflect the significance levels of results of chi-square tests comparing changes from the pre-simulation survey to the post-simulation survey in the percentage of students within each of the groups that agreed with the statements above.*

Table 4. Student Feedback on the Simulation

Statement: ***The simulation…***	Subject Group[†]
… was a useful learning tool.	74.9%
… was a realistic portrayal of the U.S. Senate.	61.7%
… helped me to learn more about politics.	65.0%
… was enjoyable.	41.5%
… made this course more interesting.	58.5%
n	183

[†] *Items in cells are the percentages of students within each category that reported that they "agree" or "strongly agree" with each statement.*

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