

The Senate Sandbox: Teaching Legislative Politics Through Open-Ended, Multi-Week Senate Simulations

Alison Craig (University of Texas-Austin)
Ryan Dennehy (University of South Carolina)
Frances Lee (Princeton University)
Joshua Meyer-Gutbrod (University of South Carolina)
Robert Oldham (APSA Congressional Fellow)
Samuel M. Simon (Princeton University)

Political scientists have come to appreciate the value of simulations for teaching a range of political processes in American and international politics (Brunazzo and Settembri 2015; Cohen 2020). Simulations engage students and create memorable experiences (Hendrickson 2021; Kaunert 2009). Students participating in simulation activities report feeling more motivated to learn and enthusiastic about the subject matter (Cohen, Alden and Ring 2021). By comparison to the traditional lecture format, simulations improve knowledge acquisition and retention (Forester, Jett and Holtey 2024; Frederking 2005), as well as develop real-world career skills (Kitchen 2022). Instructors employing simulations have often found that they tend to boost their course enrollments (Glazier 2011; Shellman and Turan 2006).

Most of the simulations employed in legislative politics courses, however, are highly structured, short-form activities in which students are given specific pieces of legislation to consider in an abbreviated legislative process (e.g., Ciliotta-Rubery and Levy 2000; Baranowski 2006; Sands and Shelton 2010). We make the case for a more expansive multi-week, immersive experience that permits students the widest possible agency over the content and activities in the simulation. As scholars of Congress, we focus on legislative politics, but our approach could be used to simulate any political institution that involves free flowing interactions between relatively equal actors.¹

The overall approach we advocate is to build a legislative simulation on the model of a “sandbox” where participants have a high degree of freedom to explore, create, and interact without a predefined set of objectives, such as passing a law or winning an election. Instructors who were 21st century teenagers themselves, or parents of them, will likely know of popular sandbox video games such as *Minecraft*. In the context of software development or training, a “sandbox” refers to a controlled environment in which users are free to experiment with software, code, or applications without risk to the live environment or the underlying infrastructure. As with a “sandbox,” we permit students to approach the simulation world in their own way, iterated over repeated play, with collaboration and competition in shared spaces and activities driving the learning experience.

While this type of simulation necessarily involves play, the objective is not for the students to have fun (although they almost always do!) Instead, it is to engage them deeply in the subject matter and push them to understand and grapple with processes and concepts in ways that are not

¹Our approach would work particularly well for simulating the U.N. Security Council, the Council of the European Union, as well as many state legislatures and city councils.

possible through lecture alone. It also leads them to develop and practice critical skills, including public and interpersonal communication, that will serve them well beyond the simulation. We believe this approach to learning is more meaningful and more practical for political science undergraduates and that it is emblematic of the innovative techniques that instructors must embrace to meet the challenges that higher education faces in the 21st century.

Why a Senate Sandbox?

To outline our approach, we draw on our experiences as instructors for a combined 10 sandbox-style simulation courses that enrolled hundreds of students. These legislative simulations have varied in their specific details but always had three essential features: (1) open-ended and student driven, meaning that students have freedom to determine the policy issues considered in the simulated legislature and how to approach their own involvement, (2) immersive role play extending across a month or more, and (3) structured to create a high degree of equality among the students.

Student responses to our approach are consistently enthusiastic. One of us had taught legislative politics for more than two decades before implementing this approach and was astonished by the degree of student excitement and positive response to the redesigned course. We find that our students describe the simulation as the most enjoyable and interesting aspect of our courses. When asked whether simulations should be longer or shorter, our students uniformly ask for more time, rather than less, devoted to simulation activities.

Our main goal in this piece is simply to make the case for integrating a large-scale simulation of this kind into legislative politics courses. Below we offer our rationale and discuss the advantages and potential concerns with the approach. For more details on how to administer a course along these lines, several of us have made our materials available on our personal websites, and one of us has a textbook describing his preferred approach to such a simulation (Meyer-Gutbrod 2025).

Open-Ended and Student-Driven

In our simulations, we ask all students to assume the perspective of a senator representing a particular state and party. Students then develop their legislative persona over the course of the simulation. To do so, they need to research and reflect on how best to meet the needs of their state. As we discuss legislative organization, they will campaign for leadership positions or coveted committee slots. By introducing and trying to advance their own legislation, they learn not just the mechanics of the legislative process but gain first-hand experience navigating the agenda-setting powers of leadership.

Our simulations allow students to introduce bills and amendments on any topics that interest them. There are no limits on the number of bills they can introduce or amendments they can file. They are also free to craft their legislative personae in any way they choose, with the only expectation being that they can defend their decisions as advancing their reelection and other goals. Crafting their personae, students may also opt to make speeches, author op-eds, disseminate tweets, and write about their television appearances or town hall meetings. They collaborate with peers on various legislative strategies of their own design. Students elect their party leaders, and legislative parties meet in caucus to negotiate legislative priorities.

Permitting wide agency for students frees up their creativity and allows them to take ownership of their own learning (Anderson and Winthrop 2025). We have found that students exhibit more buy-in when they are pursuing their own interests or goals. Rather than having the instructors in control of the simulation, students feel empowered to direct their own efforts and strategies. They build caucuses and coalitions with other students of their choosing.

Maximizing choice allows students to work in ways where they feel best able to contribute. While some students aspire to leadership positions, others are less comfortable with public speaking and prefer to work in the background. Some students may be partisan warriors, while others care passionately about a particular policy issue. By providing students with varying opportunities for participation, from giving floor speeches to writing up committee reports, our extraverted and introverted students have equitable opportunities for participation.

The result is a dynamic, unpredictable simulation to which the instructors and other students are continually reacting. The potential for serendipity and surprise generates interest and excitement. Interacting with one another over time, students discover from personal experience how and why norms of reciprocity evolve in legislative settings. Students also quickly learn why legislators often rely on cue-taking from other members. In a fast-paced class meeting, students may cover a wide range of topics, from banning hidden fees to increasing agricultural subsidies, often presenting them with issues they have not yet had the time to research personally. When asked how they made voting decisions on such a wide range of issues, students will readily admit that they deferred to their party leadership or followed the example of respected classmates—just as real-world lawmakers often do.

As part of the course, we build in opportunities for students to generalize from simulation experiences. We will pause the classroom simulation from time to time for “learning moments” to ensure students understand interesting or revealing developments. Our writing assignments also require students to reflect on experiences in the simulation and draw broader implications from them. A side-benefit of this approach is that such writing assignments are less vulnerable to plagiarism or reliance on AI, as they must address developments in the simulation.

Multi-Week Structure

While the balance of lectures to simulation days varies across our courses—from a course where all class time is devoted to simulation activity to a 50/50 split—the commonality is that simulation activities comprise a substantial portion of the course, both in terms of class meetings and written assignments. Those of us devoting almost all class time to the simulation provide more traditional course content and background material via video lectures in a “flipped classroom” format. Others have split the course, with the first half following a traditional lecture format and the second half being primarily a simulation.

We have observed several distinct advantages to this long-form simulation. First, the semester-long format better approximates the diversity of decisions involved in the legislative process (Blackstone and Oldmixon 2020). Just as members face competing demands on their time, our students must make decisions on dozens of bills across a wide range of topics. Likewise, legislative leaders must navigate difficult choices about agenda-setting, as they face pressure

from numerous competing demands from classmates. An extended simulation offers students more opportunities to get their issue priorities on the agenda and have an opportunity to discuss an issue they feel passionately about. While, for example, a debate over childcare subsidies may engage a few passionate students, nearly every student may have something to say about banning TikTok.

Second, the multi-week format provides more opportunities for experimentation and learning by doing. Deep learning is best developed through iterative cycles in which students face novel problems where they can apply their knowledge (Parker, Valencia and Lo 2018). In our simulations, students are able to experiment with different strategies, and through trial-and-error, develop a greater understanding of course concepts (Hally 2022). For example, in one of our courses, the majority party leadership began the floor day confident that they would be able to pass legislation without a unanimous consent agreement (UCA) to structure floor proceedings. Although the topic had been covered in lectures and readings, the students did not fully grasp the importance of UCAs until a bill with broad, bipartisan support consumed nearly an hour as students began offering amendments and giving speeches. In the next class meeting, the majority leader had the opportunity to try again and came prepared with a negotiated UCA, and the students saw how smoothly the legislative process could work.

Third, by building our courses around the simulation, our students continuously engage with course material and receive immediate feedback on their performance. As much as we may wish otherwise, students tend to put minimal effort towards work that does not affect their grades (Rust 2002) and procrastinate on studying until faced with an imminent deadline (Kim and Seo 2015). Continuous assessments that provide immediate feedback encourage students to engage in consistent and sustained learning (Hernandez 2012). Rather than weekly exams or homework, our students test their knowledge by their ability to navigate the legislative process and achieve their goals, whether it is advancing a bill out of committee or obstructing the opposition.

In addition to their day-to-day engagement in the simulation, students are prompted to further develop their understanding of course concepts through reflection papers, where they connect their personal experiences in the simulation to topics covered in readings and lectures. This reflection is a crucial stage of experiential learning in which concrete experience is translated into abstract conceptualization (Kolb 1984). Prompting students to assess their reelection chances based on their performance in the simulation, for example, pushes them to connect their experiences to the challenges of representation.

Finally, we find that the semester-long simulation fosters deeper engagement from our students. Students are more likely to fully commit to a simulation when they recognize it as an integral component of the course (Hally 2022). During post-simulation discussions, we have often heard our students express surprise at how “into it” their classmates became, creating a degree of positive peer pressure to participate actively. The social element of the simulation adds an additional layer of accountability for students in the form of peer recognition or reproof (Wedig 2010). Students push each other to come to class and to prepare for the day’s work. These repeated interactions structure incentives that reward students who invest in the class and penalize those who do not.

Relative Equality Among Students

We have found that one of the key elements of a successful simulation is maintaining a degree of equality among all students. When students feel powerless, they are more likely to disengage and gain less from the experience. Baranowski and Weir (2010) find that after a one-session congressional simulation, students in leadership positions or the majority party were more likely to say the activity gave them a better appreciation or understanding of the legislative process. While equality can be difficult to maintain in political simulations, our experiences suggest that a few design elements are particularly helpful for ensuring students maintain some degree of agency.

First, the unique rules of the United States Senate afford a wide range of tools to influence outcomes to every individual member. Naturally, Senate simulations elevate certain students into leadership positions, and these leaders play a vital role in keeping the simulation running smoothly. Nevertheless, every member still has the ability to influence legislative outcomes, even a rank-and-file Senator from the minority party. We have repeatedly observed students learn how to exercise these powers by objecting to unanimous consent agreements, contacting their leaders to place holds on bills, and filibustering legislation in order to extract concessions from the majority party leadership. In one particularly memorable instance, a student came to class with a printout from Riddick's *Senate Procedure* after doing their own research into how to block a bill.

This fundamental equality built into Senate rules is particularly apparent in comparison to the more hierarchical structure of the House of Representatives. In an early iteration of the course, one of us implemented a simulation of the U.S. House. The House's more straightforward majority-rule procedures had the effect of stifling student creativity and engagement, particularly among students who were not in their party leadership. Rank-and-file members of both parties felt that they had little to no power, particularly once legislation reached the floor, and their job was just to show up and vote however they were told by their leadership. Given these dynamics, it is unsurprising that one of the chief suggestions from the House simulation was that a greater portion of the class be devoted to committee meetings where they had more opportunities to influence legislation.

Concerns and Challenges

While there are numerous benefits of extended, open-ended simulations, it still requires a leap for many faculty to undertake. Opening the classroom to dynamic student decision-making is a departure from how most faculty were trained. We have identified three key concerns that faculty may face when considering an extended and open simulation. First, ceding control over the educational experience may limit the ability to transmit specific course content.. Second, the possibility of incivility and heated conflict may create discomfort. Finally, running an extended simulation may require additional resources and involve complicated logistics. While these concerns are valid, we provide tools, suggestions, and ways of thinking that alleviate them as much as possible.

Relinquishing Instructor Control

An open-ended simulation takes control away from the instructor by letting students shape what they learn. Although instructors can employ interventions and nudges along the way, they cannot focus attention on specific learning goals in the same way as in a traditional class setting. This lack of control involves risks and tradeoffs that instructors can take steps to mitigate.

One risk is that students will draw the wrong lessons from a simulation. For example, free from real-world influences like the need to raise money and get reelected, students in a legislative simulation may operate somewhat differently than real-world lawmakers and develop a misleading view of Congress. Several of us have corrected these misperceptions by role-playing as high-profile individuals and groups influential in Congress. When students appeared to ignore key interests in a way we considered unrealistic, we posted messages suggesting how we would punish errant lawmakers. We then used private conversations, lectures, and learning moments to help students understand how a real lawmaker would respond to the messages and why. Similarly, lectures can be used to remind students that even the institution they are studying may operate differently than it did during the simulation under different conditions or simply at different times. As long as students recognize this, a simulation's advantages in terms of depth of experience more than make up for disadvantages in terms of breadth.

Open-ended simulations can also make it difficult to evaluate students compared to a traditional class. Because students focus on different questions and play different roles, their experiences in the simulation will vary. For example, some students in a Congress simulation will focus on legislating while others may focus on obstructing. And in an open-ended simulation, there is no one way to play a role "correctly." Students should be introduced to important themes and concepts through readings and/or lectures which will better enable them to engage with and understand their own decisions and the choices of their peers. Broader learning can be enhanced by requiring students to regularly step out-of-character and share their experiences in a group setting to illuminate the variety of experiences that their classmates have had. Finally, we grade students individually on their ability to reflect on the simulation and tie their experiences to class material, not on any outcomes that occur in the simulation.

The Inevitability of Conflict

Given growing partisan animosity, many instructors are, understandably, reluctant to incorporate real-world politics into their classroom. In doing so, instructors create opportunities for students to introduce bias, misinformation, and inflammatory rhetoric. Intense conflict can undermine the learning environment or even threaten the credibility of the instructor who has to navigate disputes without taking sides. For this reason, many instructors adopt a purely theoretical approach. While valuable in many ways, this approach misses the unique learning opportunities that occur when connecting theory to practice.

While a simulation necessarily injects conflict into the classroom, faculty can use this as an opportunity to improve outcomes through experiential learning. Students regularly enter the classroom with biased understandings of opposing viewpoints. Several of us have taken steps to undermine these assumptions in our Senate simulations by randomizing students' assignments to political parties and states. The students placed in the party to which they do not belong or a state with which they are unfamiliar frequently obtain a keen understanding of representation as well

as more empathy for, and curiosity about, those with opposing views. Moreover, team dynamics can increase student engagement and participation but can also heighten emotional investment and stress. Again, to mitigate this, we are clear that grades reflect a student's capacity to connect experiences to theory through reflection, not their ability to achieve a particular outcome in the simulation.

Simulations can create heightened interpersonal conflicts between students. Students' in-character experiences may bleed into their out-of-character experiences. Faculty can work to separate the simulation from real life by consistently stepping out of character. This act reminds students that individuals are playing roles and reinforces learning objectives for the full class. Some of us have adopted a "What Just Happened?" motion, which students are free to invoke to pause the simulation to open discussion aimed at understanding both institutional rules and in-character motivations that students are obligated to share. We often tell our students that as far as their grade is concerned, everyone succeeds when everyone understands Congress together. Finally, it is also important to create opportunities to laugh, both in-character and out-of-character, to separate the student experience and the in-character experience.

The Sufficiency of Resources

Instructors interested in our approach to simulation learning might worry that it is only possible with extraordinary instructional resources. However, we have seen simulations work in a variety of settings: with small and large class sizes, with expert teaching assistants and no teaching assistants, and with heavy and light teaching loads. Our approach is flexible and allows instructors to tailor it to their needs and resources.

For example, those of us at universities that utilize breakout or discussion sections in courses have used the sections to hold committee meetings, giving students opportunities for more detailed policy deliberations than are possible in the main class. Breakout sessions, however, are not an option for all instructors. One coauthor adjusted for this at his institution by devoting several main class sessions to committee meetings. While less structured and more difficult to monitor, this approach also has some advantages over separate discussion sections, as it fosters more student control and allows different committees to meet simultaneously. Using the main classroom for committee meetings also allows students to participate in multiple committees and encourages student engagement with a wider array of their classmates and with more policy topics.

We anticipate that simulation learning will become even easier to implement in coming years as more resources to guide instructors become available via the internet and academic presses (e.g. Meyer-Gutbrod 2025). Beyond this, there is a growing community of scholars who are passionate about incorporating simulation learning into political science. As members of that community, we welcome and encourage outreach from anyone who is trying to figure out how to make simulation learning work in their classroom and needs advice for managing their specific constraints.

Conclusion

It is no secret that today's instructors are competing for students' attention with an ever-growing number of distractions and that the traditional lecture format is increasingly ill-suited for effective learning. Our multiweek, open-ended simulation approach aims to reverse this tide by

engaging students in the classroom through learning methods that are widely recognized as effective, even if they are seldomly deployed in higher education: self-direction, iteration, and application. We have seen outstanding results from our approach with all types of students – in our class ratings, in the quality of work, and in our interactions with them.

Higher education must be innovative if it is going to provide students with meaningful learning experiences that prepare them for life beyond campus. Perhaps counterintuitively, learning through play is one way to advance these important goals and reinvigorate political science education for the 21st century.

References

- Anderson, Jenny and Rebecca Winthrop. (2025). *The Disengaged Teen: Helping Kids Learn Better, Feel Better, and Live Better*. New York: Penguin Random House.
- Baranowski, M. (2006). Single session simulations: The effectiveness of short congressional simulations in introductory American government classes. *Journal of Political Science Education*, 2(1), 33-49.
- Baranowski, M., & Weir, K. (2010). Power and politics in the classroom: The effect of student roles in simulations. *Journal of Political Science Education*, 6(3), 217-226.
- Blackstone, B., & Oldmixon, E. (2020). Simulating the legislative process with LegSim. *Journal of Political Science Education*, 16(4), 526-536
- Brunazzo, Marco and Pierpaolo Settembri. (2015). “Teaching the European Union: a Simulation of Council’s Negotiations.” *European Political Science*, 14(1),1–14.
- Ciliotta-Rubery, A., & Levy, D. (2000). Congressional committee simulation: An active learning experiment. *PS: Political Science and Politics*, 33(4), 847-852.
- Cohen, Alexander H. (2020). *Gaming the System : Nine Games to Teach American Government through Active Learning*. New York: Routledge.
- Cohen, Alex, John Alden and Jonathan Ring. (2021). “Using a “Gateway Game” to Stimulate Student Interest and Build Foundational Knowledge.” *Journal of Political Science Education*, 17(sup1), 104–115.
- Forester, Summer, Janel Jett and Bjorn Holtey. (2024). “From “Lab Rats” to “Mad Scientists”: Cultivating Agentic Learning Through Student-Led Simulation Redesign.” *PS: Political Science & Politics*, 57(3), 440–446.
- Frederking, Brian (2005). Simulations and Student Learning, *Journal of Political Science Education*, 1:3, 385-393.

- Glazier, Rebecca A. (2011). "Running Simulations without Ruining Your Life: Simple Ways to Incorporate Active Learning into Your Teaching." *Journal of Political Science Education*, 7(4), 375–393.
- Meyer-Gutbrod, Joshua. (Forthcoming 2025). *A Simulation of the United States Senate*, New York: Palgrave Macmillan.
- Hally, E. (2022). An Argument for Lengthier, More Realistic, More Outcomes-Oriented Games. In *Simulations in the Political Science Classroom* (pp. 42-55). Routledge.
- Hendrickson, Petra. (2021). "Effect of Active Learning Techniques on Student Excitement, Interest, and Self-Efficacy." *Journal of Political Science Education*. 17(2), 311–325.
- Hernandez, R. (2012). Does continuous assessment in higher education support student learning? *Higher Education*, 64, 489-502.
- Kitchen, Veronica. (2022). "Using Games and Simulations to Scaffold Experiential Learning in Global Politics." *Journal of Political Science Education*, 18(1), 119–137
- Kaunert, Christian. (2009). "The European Union Simulation: From Problem-Based Learning (PBL) to Student Interest." *European Political Science* 8(2):254–265.
- Kim, K. R., & Seo, E. H. (2015). The relationship between procrastination and academic performance: A meta-analysis. *Personality and Individual Differences*, 82, 26-33.
- Kolb, D. A. (1984). *Experiential Learning: Experience as the Source of Learning and Development*. Englewood Cliffs, NJ: Prentice Hall.
- Parker, W. C., Valencia, S. W., & Lo, J. C. (2018). Teaching for deeper political learning: A design experiment. *Journal of Curriculum Studies*, 50(2), 252-277.
- Rust, C. (2002). The impact of assessment on student learning: How can the research literature practically help to inform the development of departmental assessment strategies and learner-centered assessment practices? *Active Learning in Higher Education*, 3(2), 145-58.
- Sands, E. C., & Shelton, A. (2010). Learning by doing: A simulation for teaching how Congress works. *PS: Political Science and Politics*, 43(1), 133-138.
- Shellman, Stephen M. and Kursad Turan. (2006). "Do Simulations Enhance Student Learning? An Empirical Evaluation of an IR Simulation." *Journal of Political Science Education*, 2(1), 19–32.
- Wedig, T. (2010). Getting the most from classroom simulations: Strategies for maximizing learning outcomes. *PS: Political Science & Politics*, 43(3), 547-555.