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Do Political Science Simulations Promote Knowledge, Engagement, Skills, and Empathy?

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ABSTRACT

Scholars of teaching and learning frequently examine whether simulations promote content knowledge and engagement with course material. But many educators use simulations to promote additional goals. This article suggests that designers of political simulations often pursue four ends: *knowledge, engagement, skills, and empathy (KESE)*. The article discusses the popularity of simulations and the reasons that political science educators use them. It establishes the KESE framework and pays particular attention to the ways that simulations might promote soft skills (e.g., public speaking, negotiation) and/or empathy. Then, to investigate the extent to which simulations promote KESE goals, the article examines several years of pre- and post-surveys of students who did and did not participate in the Mid-Atlantic European Union Simulation. It finds that the KESE framework and intentional, systematic assessment of all four KESE components can help to capture the full array of simulations' potential benefits.

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Simulations; active learning; assessment

Simulations have become a popular pedagogical tool. Middle school civics teachers, post-graduate seminar leaders, and educators at all intermediate levels see potential value in simulations. They believe that simulations will help them to prepare students for challenging situations outside the classroom. They suspect that simulations will help their students to become more critical thinkers and to better manage challenging and potentially stressful situations.

Beyond these basic beliefs and suspicions, though, what are simulations for? How can we ascertain whether simulations actually accomplish our goals as political science educators? When we subject our simulations to systematic scrutiny, is our suspicion that “simulations work” borne out? This article pursues these questions.

We begin by documenting and discussing political scientists' attraction to simulations as a pedagogical tool. Synthesizing the expanding literature on simulations, we suggest that political science simulations have four basic goals. These goals—the promotion of *knowledge, engagement, skills, and empathy*—can be summarized using the “KESE” acronym. After discussing each of the four goals, we posit hypotheses about the extent to which simulations promote each goal. Then, analyzing a series of pre-/post-surveys completed by a succession of student participants in one long-standing simulation

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involving undergraduate students from multiple institutions—the Mid-Atlantic European Union Simulation (MEUS)—we test the hypotheses.

We find that simulations can increase knowledge and engagement but not always to an extent that rises above and beyond the knowledge and engagement that students gain in traditional classroom environments. We find, furthermore, that simulations may help to develop skills in public speaking and leadership and influence participants' attitudes, particularly when participants come to the simulation without strong prior beliefs. We conclude by reflecting on the implications of our findings for the future of simulations and assessing the strengths and limitations of this widespread disciplinary pedagogy.

The ascent of simulations as a pedagogical tool in political science

We define simulations, following Stoil and Lester (1979) and Stover (2005), as exercises “that require students to play a role, either as a specific character from a known institution or a general actor from an undisclosed or fictional one.” In recent decades, simulations have become an attractive tool for political science educators. Faculty across the discipline's subfields—political theory (Gorton and Havercroft 2012; Perry and Robichaud 2020; Weidenfeld and Fernandez 2017), international relations (Asal and Kratoville 2013; Engel et al. 2019; Giovanello, Kirk, and Kromer 2013; Meibauer and Nøhr 2018; Sears 2018; Posch and Stenberg 2021; Shaw and Switky 2018), comparative & US politics (Baranowski and Weir 2010; Blackstone and Oldmixon 2020; Nishikawa and Jaeger 2011; Rackaway and Goertzen 2008), and research methods (Carsey and Harden 2015)—have all incorporated simulations into their toolkits and have reported in various ways on the challenges, successes, and (occasionally) failures of particular simulations.

The design, organization, size, intensity, duration, and modality of political science simulations all vary widely. At one end of the spectrum are loosely organized snap simulations that involve fewer than ten students, require students to do little preparation in advance of the exercise, last for thirty minutes or less, and take place entirely within a traditional classroom. At the other end of the spectrum are deeply institutionalized simulations that involve hundreds of students from dozens of universities. The latter events are resource- and time-intensive. They require students to carry out deep research. Their gamut stretches across months, and they take place online and/or over a period of days at a central location. Many, perhaps most, simulations take place between these two poles. They are intentionally designed, last for a few days/weeks, take place in person, and involve all members of a single medium-sized (e.g., 25–35 student) class section.

As the popularity of political science simulations has expanded and approaches to simulation design have proliferated, a vibrant simulation-based scholarly community has developed. In 2020, for example, “Simulations and Games” was one of four tracks at the American Political Science Association's Teaching and Learning Conference. The *Journal of Political Science Education*—one of four journals published by APSA—has featured a consistently high number of simulation-based articles since its launch in 2005. Between 2005 and July 2021, for example, *JPSE* published 63 issues. Together, these issues

contained 582 full-length research articles. Of the 582 articles, 92 (15.8%) contained “simulat*” (e.g., simulation, simulations, simulating) in the title. Thus, on average, *JPSE* devotes 1.46 articles per issue to simulations. “Simulation*” is the fifth most common substantive word in the set of all *JPSE* research article titles, after “political,” “learning,” “science,” and “teaching.”

While a deeper history of simulation uptake and innovation is beyond this article’s scope, it is important to note that simulations seem to have become much more popular over time, both as a pedagogical practice and as a subject of discipline-based scholarship of teaching and learning (SoTL). *Teaching Political Science*, a journal whose aims and scope were similar to *JPSE*’s, published 62 issues during its run from 1973–1989. While simulations received some attention, they were much less frequent topics of analysis than they have been in *JPSE*. Of the 440 articles that *TPS* published, for example, 23 (5.2%) contained “simulat*” in the title. This represented only 0.37 articles per issue, and “Simulation*” was only the fifteenth most common substantive word in the full set of *TPS* articles.

Simulation goals: knowledge, engagement, skills, and empathy

While political science simulations have become an increasingly common instructional tool, which ends do educators pursue when they employ that tool? In a metaanalysis of the political science simulations literature, Baranowski and Weir (2015) suggest that there are three potential simulation goals: (1) enhancing student learning; (2) enhancing student engagement; and (3) challenging student attitudes or raising awareness of issues. Educators generally prioritize the first goal (see also Wedig 2010), and, in terms of both theory and empirical approach, Baranowski and Weir privilege this goal. Theoretically, they note that “one may argue that [goal (2)] is simply in service of the primary goal of enhancing student learning” and that “as with [goal (2)], it is certainly possible that students may come away from a simulation with changed attitudes without necessarily having learned all that much, meaning that attitude change is not a reliable indicator of learning” (Baranowski and Weir 2015, 393). Their implicit rank ordering of goals (with goal (1) superior to goals (2) and (3)) is also clear in their article’s empirical approach: “while we acknowledge the potential value in engaging students and raising awareness, we focus solely on what we know about the effect simulations have on increasing objectively measurable student knowledge” (393).

It is not controversial, then, to suggest that the primary goal of simulations is the promotion of *knowledge*. Simulations should encourage students to learn substantive material. After a successful simulation of the European Union’s (EU’s) ordinary legislative procedure, for example, students should be able to meaningfully and confidently discuss the actors and institutions involved in the procedure. They should understand the ways that various policy actors form their identities and preferences. They should appreciate the opportunities and constraints that actors face and the factors that promote and obstruct political compromises. On a more meta level, they should be able to identify the extent and limitations of the simulation’s verisimilitude—they should appreciate the extent to which the simulation is and is not like the real world. The knowledge that students gain through the simulation will not be of the transitory, “in one ear,

out the other” variety (Levin-Banchik 2018; Lohmann 2020; Wunische 2019). Rather, it will be sustainable. Students will carry the knowledge with them as their academic and professional careers develop.

The research literature, reflections on our own simulation experiences, and conversations with many colleagues who use simulations, however, suggest that simulations are not *solely* about knowledge. Faculty who employ simulations often have goals beyond knowledge acquisition. Such alternative/additional goals include, at a minimum, *engagement* (as noted in Baranowski and Weir’s “goal 2”), *skills*, and *empathy*.

Studies emphasizing *engagement* stress the status of simulations as exercises in active learning (Clark et al. 2017; Hendrickson 2021; Rivera and Simons 2008). Engagement scholars draw from educational psychologists’ suggestion that student interest matters—that passive knowledge pales in comparison with active engagement with concepts and ideas. They are motivated both by the notion that “individuals interested in a task or activity have been shown to pay more attention, persist for longer periods of time, and acquire more and qualitatively different knowledge than individuals without such interest” (Hidi 1990, 554), and by the broader idea that interest/engagement “may be viewed as essential with respect to adjustment and happiness in life” (Harackiewicz and Hulleman 2010, 44). From the perspective of engagement, a simulation will succeed when students come out of the experience excited about the topic, eager for deeper information about the issues covered, and ready to incorporate lessons learned to future studies and/or courses of action. A student coming out of an EU simulation, for example, will be more interested in European affairs and more excited about working on EU-related questions. The student’s interest in the topic will not be transitory. Rather, it will sustain itself well beyond the simulation experience itself.

Scholars aiming to increase student knowledge and engagement both prioritize content. Those who stress knowledge want students to master content; those who push for engagement want to encourage sustainable interest in the content concerned. Some faculty also use simulations, though, to build *skills*. They want their simulations to help students develop capacities—critical thinking, leadership, logical reasoning, technical writing, public speaking, coalition formation, negotiation, and beyond (Bernstein 2008; Druliolle 2017; Bradberry and De Maio 2019; Hammond and Albert 2020; Kirschner 2020; Levintova et al. 2011; Mariani and Glenn 2014; Rackaway and Goertzen 2008; Raymond 2012, 2014; Shaw 2006)—that will be useful regardless of the content of the simulation. Theoretically, a simulation of any institution (e.g., a city council, the UN Security Council) or any dilemma (e.g., a campus parking policy; a decision to authorize the use of force) could contribute to such skills. The skills emphasis revolves less around the dynamics of the organization being simulated or the content of the issue being debated. Rather, it involves proficiencies that students develop as a consequence of participating in the simulation. Referring again to the EU decision-making simulation: a faculty member seeking to equip students with particular skills may design the simulation with the assumption that few participants will go on to work for or with the EU institutions. They will assume, though, that as future professionals, most students will need to be comfortable speaking in public, leading project teams, understanding interlocutors’ likely strategic orientations, and negotiating with others. They will design the simulation in a way that calls forth and trains these proficiencies.

Some educators also use simulations to promote *empathy*. Following Mirra (2018, 4, italics original), we define empathy as a process of “moving beyond oneself and *into* the perspective of another person.” And, following Wiseman (1996, 1165), we suggest that empathy has multiple attributes—individuals who exhibit empathy “see the world how others see it, understand another’s feelings, are nonjudgmental, and communicate the understanding” of another’s position. Like the skills just discussed, we believe that empathy is trainable. Unlike some of the other skills, though, empathy is a psychologically sophisticated process. While critical thinking, logical reasoning, technical writing, and public speaking challenge students to develop the ways that they process and present information, empathy (along with coalition formation, leadership, and negotiation) require students to appreciate the world from others’ points of view. Indeed, future research may interrogate the extent to which empathy and the latter skills are related.

Political scientists who use simulations to “educate for empathy” generally have three actors in mind—P1 (the student), P2 (the alter ego), and P3 (a third party). Of course, P1 is the instructor’s primary concern. During and after a simulation, they may expect to witness outcomes that are either *internal* and or *external/active* to P1. Internal outcomes refer to P1’s internal states, e.g., the student’s self-awareness, curiosity, ability to “listen to” P2, ability to understand P2’s feelings, ability to take on the positions of P2, and ability to withhold judgment of P2. External/active components include P1’s ability to convincingly and sincerely portray the positions of P2 and narratively communicate her understanding of P2’s position to P3 verbally and/or in writing. A full account of “empathy development” would attend to all of empathy’s attributes and outcomes. As discussed below, our present analysis of “moving beyond oneself and *into* the perspective of another” focuses on empathy’s internal outcomes: we use a pre-post survey design to determine whether playing an alter ego is associated with P1’s movement toward positions held by P2.

Simulations, after all, are exercises in role attainment where participants (P1s) assume a persona. Students (P1) are generally asked to bracket their own identities, biases, suppositions, and action orientations and to take on the identities, biases, suppositions, and action orientations of a differently situated actor (P2). In a study of simulations and empathy, for example, Stover finds that a student who perceives an Arab-majority state as excessively aggressive before playing that state’s prime minister comes, after experiencing the prime minister’s values, perceptions, and constraints, to see the state’s government as less aggressive. Zappile, Beers, and Raymond (2017), similarly, find that students tasked with drafting policies to address a post-earthquake displaced persons crisis exhibit higher levels of global empathy than they did before taking part in the simulation. In the context of an EU decision-making simulation, a student who enters the simulation suspicious of financial transfers from richer to poorer EU member-states may, after playing the prime minister of a poorer member-state, come to understand and come closer to endorsing the latter government’s positions and priorities. Like simpler skills, empathy is an outcome that, theoretically, participants should be able to apply beyond the simulation’s confines. By “drilling empathy,” simulations can expose participants to the kinds of dilemmas that they are likely to encounter regardless of the professional positions they eventually assume.

To summarize, the literature suggests that simulations can have at least four goals: *knowledge*, *engagement*, *skills*, and *empathy*. The KESE acronym summarizes the four goals. The general expectation is that simulations serve to promote each goal. Students will leave a simulation experience with greater knowledge about the content and/or processes at the core of the simulation, more engaged with that content, with greater mastery of skills developed during the simulation, and a greater degree of empathy for the actors they have played in the simulation.

It is not *prima facie* clear, however, whether simulations will do more to promote KESE goals than more traditional pedagogies. This is particularly—if not exclusively—clear when it comes to knowledge. Certain studies (e.g., Krain and Lantis, 2006), after all, suggest that simulation participants experience factual knowledge gains that are roughly equal to those of students who complete lecture-based courses. The added value of simulations is clearer when it comes to engagement: simulation participants exhibit a much larger increase in engagement with the topic than students in traditional classroom settings (Clark et al. 2017). This project expects to find similar added value when it comes to skills and empathy, as a lecture-based environment does not provide as many opportunities for developing soft skills or putting oneself in the position of another.

These expectations lead to the following hypotheses.

H1: Political simulations increase students' factual knowledge, but the knowledge dividend is no greater than the dividend gained in a traditional lecture-based experiences.

H2: Political simulations increase students' engagement more than traditional lecture-based experiences.

H3: Political simulations increase students use of soft skills more than traditional lecture-based experiences.

H4: Political simulations increase students' empathy—their ability to move beyond themselves and into the perspective of their alter ego.

Data and methods

We test these hypotheses using survey data. Some surveyed students participated in the Mid-Atlantic European Union Simulation (MEUS), and others completed a traditional lecture-based course that covered material on the EU. The MEUS has taken place in Washington, D.C. each November for the last 30 years.¹ Each year, approximately 15 institutions and 150 undergraduate students from the mid-Atlantic region participate in the three-day event. Faculty from six of the participating institutions (two public and two private; total student populations ranging from roughly 2,500 to roughly 20,000) have conducted pre- and post-surveys of students over the course of four consecutive years. All institutions are located in the US mid-Atlantic region (e.g., Ohio, Maryland, Pennsylvania, Virginia). Simulation participants are enrolled in an upper-division course that is connected with the simulation (generally a course focused on EU and/or European politics). The control group includes students at the participating institutions

who do *not* participate in the Mid-Atlantic EU Simulation but who enroll in more traditional lecture-based courses with content focused on EU politics.

While the simulation's culminating event takes place over three days in November, students are assigned their alter egos early in the fall semester. Professors require them to conduct extensive background research on the individuals they will play (e.g., personal biography, political biography, partisan constraints, roles played within the institution they staff, scandals involved in, pet political projects, positions on the topics taking place at the simulation). Students frequently scrutinize speeches that alter egos have given and watch/listen to video/audio of the alter ego discussing public issues. During the preparation period, students also examine, research, and discuss the other actors who will be participating in the event and construct matrices that help them to identify potential allies and opponents. The event involves the drafting, debate, amendment, and (usually) passage of legislative proposals and the preparation and execution of a European Council summit of heads of state and government. Each institution that participates in the simulation represents a particular EU member-state (or member-states, depending on the size of the institution's delegation). Participating students play the roles of European leaders in several EU institutions. The structure mimics the multilevel, institutionally complex EU policy-making process and involves various meetings of the European Commission, the European Parliament, the Council of the European Union, and the European Council.

The mode of student participation varies across each participating institution. Many of the institutions offer a corresponding course on the politics of the EU. At those institutions, students must be enrolled in the course to participate in the simulation. At other institutions, students participate in the simulation through purpose-built one-credit courses or academic clubs/organizations.

To assess the extent to which participation in the simulation promotes KESE goals, we have designed a pre- and post-survey instrument that has been administered every year since 2017. Institutional Review Boards (IRB) at multiple universities have approved the survey design and procedures, and all participating students grant their informed consent before participating in the survey. The instrument has been implemented by MEUS-participating faculty from six schools, including the home institutions of this study's two authors.

In the survey's pre- phase, student participants complete the survey within the first three weeks of the semester. In the post- phase, they complete the same survey (with the small modifications discussed below) within the two-week period that follows the simulation event (for students in the treatment group) and at the end of the semester (for students in the control group). The literature (see, e.g., Bernstein and Meizlish 2003) suggests that the beneficial effects of simulation participation may take time to accrue. While future research may allow us to test that proposition by administering "post-posttests," we restrict ourselves in the present context to post-tests administered soon after the relevant educational experience. To preserve anonymity, no survey participants provide their names. Rather, each participating student's pre- and post-responses are matched using two questions that ask each respondent to indicate the first name of their maternal grandmother and the name of the street on which they lived during their final year of high school.

The survey instrument includes several questions designed to gauge the knowledge, engagement, skills, and empathy of student respondents.

To measure knowledge, the instrument contains a set of ten true/false questions about the EU. This set expands on the 3–4 questions that the European Election Study and the Eurobarometer use to measure respondents' EU knowledge. While these types of true/false questions may allow respondents to guess correct answers, they have been widely used in the extant literature and has been found to be a valid indicator of political knowledge, including EU knowledge. One of the questions, for example, asks respondents to evaluate the following (false) statement as true or false: “(t)he European Parliament initiates all EU legislative proposals.” The ten questions we use to assess student knowledge are included in [Appendix A](#). Participants' responses to all ten questions are used to construct a knowledge scale (ranging from 0 to 10, with a score of “1” recorded for each correct answer) for each survey that all respondents complete.

To measure engagement, the survey asks “(t)o what extent would you say you are interested in the European Union?” Potential responses include “very”, “somewhat”, “don”t know”, “a little”, and “not at all.” The survey asks that same question about politics more broadly: “(t)o what extent would you say you are interested in politics?”, using the same response metric as the question about EU interest. Finally, we use a question asking “(w)hen you get together with friends and relatives, would you say you discuss frequently, occasionally, or never about international political matters”.

To measure skills, students are asked to self-evaluate their proficiencies in the areas of public speaking, leadership, and negotiation. Potential responses for all three skills include “significantly above average”, “slightly above average”, “average”, “slightly below average”, and “significantly below average”. While previous research (Kartal, 2021) suggests that students may overestimate their skill levels in event pretests, we believe that meaningful differences in individual students pretest and post-test evaluations may still be observed.

Finally, to measure empathy, the instrument asks students to locate themselves along two ideological scales: one gauging left/right ideology, the second gauging support for the EU. On the first scale, students chose between “0” (the left-most position) and “10” (the right-most position). On the second scale, they chose between “0” (Europhiles, the most supportive of the EU) and “10” (Eurosceptics, the most opposed to the EU). In the post-survey, students who have participated in the simulation are also asked to place their simulated roles (the leaders they played in the simulation) on these same two scales. By the time of the post-test, most participants have studied their assigned leader extensively and are aware of the leader's positions on both scales. We estimate the difference between each student's pre-survey self-placements and the placements of their simulated roles to determine each student's ideological divergence. The difference between each student's own pre- and post-ideological placements are then estimated to determine whether, how much, and in which direction their views changed over the course of the simulation. The resulting measures of empathy capture the extent to which a student's self-placement changes after the simulation and whether such change moves toward the ideologies of the individual that the student portrays throughout the simulation exercise.

As additional controls, the survey includes questions asking for students' age, gender, whether they have visited Europe, and the frequency with which they discuss local, national, and international political matters when getting together with friends and relatives. [Appendix A](#) includes the full set of survey questions.

Results

We start by examining the relative effects of participating in the EU simulation on knowledge about the EU. All survey participants are asked the same factual questions about the EU at the start and near the end of the semester. [Table 1](#) shows how different groups perform on the 0–10 index at the beginning and end of the semester. For students who participate in the simulation, the mean score on the knowledge index improves by nearly one full point, suggesting that students performed approximately 10% better after the simulation than they did before the simulation. The difference of means *t* test indicates that a difference exists between the pre- and post-samples: the *t* statistic is -3.34 , and the corresponding two-tailed *p* value is 0.001, indicating the difference is statistically significant. The simulation may thus be associated with knowledge gains about the core subject.

The results are far less conclusive as to whether simulations enhance knowledge above and beyond taking a traditional course on the subject. In [Table 1](#), we also compare the change in knowledge across four groups of students: a control group of students who neither enrolled in an EU class nor participated in the simulation, a group who did not take an EU course but participated in the simulation, a group who took an EU course but did not participate in the simulation, and a group who both took an EU course and participated in the simulation. The students who only took an EU course appear to have learned more about the EU over the course of the semester than those who only participated in the simulation. Moreover, those students who only took the EU course outperformed those students who both took an EU course and participated in the simulation. Altogether, as found in prior research (Clark et al. 2017),

Table 1. Comparison of means on knowledge.

	Start of semester	End of semester
All simulation participants	6.35*** (0.17) <i>N</i> = 104	7.32*** (0.23) <i>N</i> = 104
Subsets		
Neither took an EU course nor participated in simulation	4.82* (2.23) <i>N</i> = 11	6.45* (2.7) <i>N</i> = 11
Did not take an EU course but participated in simulation	6.61 (1.24) <i>N</i> = 18	7.33 (2.35) <i>N</i> = 18
Took an EU course but did not participate in simulation	6.11*** (1.21) <i>N</i> = 35	7.34*** (1.88) <i>N</i> = 35
Both took an EU course and participated in simulation	6.29*** (1.85) <i>N</i> = 86	7.31*** (2.41) <i>N</i> = 86

Note. The knowledge scale runs from 0 (not knowledgeable) to 10 (knowledgeable). *Indicates a difference at .1; **at .05; ***at .01.

participating in a simulation does not appear to lead to knowledge gains above and beyond a typical classroom experience.

H2 expects simulations to increase interest in the core subject matter, particularly as students have opportunities to engage actively with the content. The survey participants were asked questions to gauge their level of interest in and engagement with the EU at the start and the end of the semester. Column A of [Table 2](#) summarizes the results. The results in the post-survey suggest that the simulation may have the expected effect on EU interest. Of all four groups, students who simply participated in the simulation registered the highest interest in the EU, followed by students who completed both an EU course and the simulation. However, the difference of means tests do not find a significant difference in the pre- and post-results for any of the four categories.

We note that the results are more encouraging when the 2018 simulation is removed from the sample; after removing this year, levels of interest in the EU increase from the start to the end of the semester. For some reason, the experience of students during this year seemed to have a large enough adverse effect on interest as to skew the entire pooled sample. That result, in of itself, suggests that the dynamics of individual simulations may also shape the educational experience.

Column B of [Table 2](#) presents the results of changes in political interest more broadly. Focusing exclusively on the post- results, the simulation appears to have the expected effect: those students who solely participated in the simulation and who completed both an EU course and the simulation register the highest levels of political interest. Moreover, comparing the pre- and post- results, the political interest of those who participated in the simulation either held steady (for those only in the simulation) or actually increased (for those in the simulation and class together). However, here again, the difference was not significant for any of the categories.

[Table 2](#)'s column C documents changes in the frequency with which students discuss international matters with friends and family. This measure suggests that the simulation has an effect on interest above and beyond taking a class on the same subject. All groups except the one containing students who only enrolled in an EU course reported talking about international matters with greater frequency. Students who participated in the simulation reported the greatest increase in discussing international matters. Moreover, for all students who participated in the simulation, the mean increased by about 0.15, and the difference between the pre/post-groups is significant at 0.08 on the paired *t* test. This finding indicates that such experiences might broaden the interest of participating students, which should be edifying for faculty teaching about other parts of the world.

Next, we examine the effects of simulation participation on students' perceptions of their soft skills. Proponents of simulations argue that such experiences may lead to improved skills in areas such as public speaking and negotiation. The MEUS requires most students to deliver prepared remarks and engage in informal, ongoing debate over a pre-prepared proposal. Additionally, students engage in deal-making in order to reach compromise positions. H3 expects the simulation experience to improve participants' sense of confidence in public speaking, leadership, and negotiation.

The post-results indicate that the simulation does increase self-evaluated abilities in public speaking. The students who completed an EU course together with the

Table 2. Comparison of means on engagement.

	A		B		C	
	Interest in the EU		Interest in politics		Discussion of international news	
	Start of semester	End of semester	Start of semester	End of semester	Start of semester	End of semester
All simulation participants	3.19 (0.06) N = 100	3.13 (0.07) N = 100	3.57 (0.06) N = 104	3.59 (0.07) N = 102	2.19** (0.06) N = 103	2.34** (0.06) N = 102
Subsets						
Neither took an EU course nor participated in simulation	3.00 (0.67) N = 10	2.50 (1.08) N = 10	3.82 (0.40) N = 11	3.55 (0.69) N = 11	2.18 (0.60) N = 11	2.27 (0.90) N = 11
Did not take an EU course but participated in simulation	3.50 (0.51) N = 18	3.33 (0.59) N = 18	3.78 (0.55) N = 18	3.78 (0.43) N = 18	2.33** (0.69) N = 18	2.67** (0.49) N = 18
Took an EU course but did not participate in simulation	3.23 (0.65) N = 35	3.06 (0.87) N = 35	3.54 (0.78) N = 35	3.49 (0.70) N = 35	2.26 (0.70) N = 35	2.20 (0.68) N = 35
Both took an EU course and participated in simulation	3.12 (0.60) N = 82	3.09 (0.74) N = 82	3.52 (0.63) N = 86	3.55 (0.70) N = 84	2.16 (0.61) N = 85	2.27 (0.63) N = 84

Note. *Indicates a difference at .1; **at .05; ***at .01.

simulation register the highest self-evaluations of their speaking abilities. However, as shown in column A of Table 3, among the two groups of students who participated in the simulation, the mean self-evaluation score (on a five-point scale with higher values indicating greater confidence) either declined or remained steady from the start to the end of the semester. Similarly, the difference of means *t* test indicates that no difference exists between the same students before and after the simulation. Interestingly, the scores increase for students who only enrolled in a course, especially for those students who completed an EU course without the simulation.

Column B of Table 3 summarizes the differences in relation to students' self-evaluations of their leadership abilities. The simulation offers several opportunities for leadership between students playing the roles of leaders and, in the case of some students, engaging in leadership activities such as setting an agenda, moderating discussions, and voting on decisions. Again, just based on the post- scores, the simulation appears to produce students with more confidence in their leadership abilities. The group with the highest mean score is the one containing students who participated in both the course and simulation, followed by those who only participated in the simulation. Moreover, the change in scores from the pre- to the post- survey reflect the expectations presented in H3: the mean score on the leadership question (measured with the same five-point scale as with public speaking) increased from the start to the end of the semester for students who both took an EU course and participated in the simulation. Notably, that score decreased over the course of the semester for students in the other three groups. The difference of means *t* test also indicates an increase in perceptions of leadership abilities for all simulation participants, although this difference is not statistically significant.

Our final "skills" assessment examines the extent to which the simulation might improve students' negotiation skills. The simulation requires students to enter into several back-and-forth exchanges with one another. Over the three days of the simulation, there are scheduled and informal breaks in which students might engage in deal-making with one another (as the representative of their simulated country or political group). Given these activities, some students may discover an aptitude for such negotiations. Column C of Table 3 presents the comparisons with the four survey groups. The mean reported scores on negotiation (using the same five-point scale) increased for all groups except those students who just participated in the simulation. In general, taking a course appears to benefit negotiation skills more than the simulation—an unexpected result given that most courses likely do not include elements that require such negotiation. The difference of means *t* test indicates an increase in negotiation skills for all simulation participants across the semester; that difference, though, is not statistically significant.

We discuss the implications of these findings in greater detail below. In short, however, the simulation does not appear to have a significant effect on the perceived soft skills of participating students.

Finally, we consider whether simulations may shape student empathy for those with whom they disagree. Unfortunately, the survey does not include a direct measure of empathy. However, we are able to measure the extent to which students' attitudes (as measured by left/right ideology and support for the EU) changed over the course of the

Table 3. Comparison of means on skills.

	A		B		C	
	Start of semester	End of semester	Start of semester	End of semester	Start of semester	End of semester
All simulation participants	3.65 (0.08) N = 104	3.64 (0.08) N = 104	3.96 (0.08) N = 103	3.99 (0.08) N = 103	3.63 (0.08) N = 102	3.76 (0.08) N = 102
Subsets						
Neither took an EU course nor participated in simulation	3.09 (0.70) N = 11	3.18 (0.75) N = 11	3.70 (0.82) N = 10	3.60 (0.70) N = 10	3.60 (0.84) N = 10	3.90 (0.88) N = 10
Did not take an EU course but participated in simulation	3.56 (1.04) N = 18	3.50 (1.04) N = 18	4.0 (0.49) N = 18	3.89 (0.76) N = 18	4.00 (0.84) N = 18	3.94 (0.64) N = 18
Took an EU course but did not participate in simulation	3.38 (0.89) N = 34	3.59 (0.96) N = 34	3.91 (0.61) N = 35	3.86 (0.73) N = 35	3.60* (0.81) N = 35	3.89* (0.90) N = 35
Both took an EU course and participated in simulation	3.67 (0.82) N = 86	3.67 (0.80) N = 86	3.95 (0.74) N = 85	4.01 (0.79) N = 85	3.55* (0.84) N = 84	3.73* (0.84) N = 84

Note. *Indicates a difference at .1; ** at .05; *** at .01.

Table 4. Comparison of means on empathy.

	A		B	
	Left/right ideology		EU ideology	
	Start of semester	End of semester	Start of semester	End of semester
	5.25 (0.23)	5.13 (0.23)	5.25 (0.23)	5.13 (0.23)
All simulation participants	<i>N</i> = 104	<i>N</i> = 104	<i>N</i> = 103	<i>N</i> = 104
Subsets				
Neither took an EU course nor participated in simulation	4.27 (1.79) <i>N</i> = 11	4.09 (1.70) <i>N</i> = 10	4.09 (1.87) <i>N</i> = 11	4.91 (1.38) <i>N</i> = 11
Did not take an EU course but participated in simulation	4.39 (1.85) <i>N</i> = 18	4.28 (2.32) <i>N</i> = 18	4.28 (2.85) <i>N</i> = 18	3.94 (2.90) <i>N</i> = 18
Took an EU course but did not participate in simulation	5.59 (2.19) <i>N</i> = 34	5.6 (2.43) <i>N</i> = 35	5.29 (1.81) <i>N</i> = 35	4.77 (2.00) <i>N</i> = 35
Both took an EU course and participated in simulation	5.43 (2.43) <i>N</i> = 86	5.31 (2.36) <i>N</i> = 86	5.04 (2.12) <i>N</i> = 85	4.99 (2.09) <i>N</i> = 86

semester. Any change in attitudes may be attributed to a range of factors, including increased knowledge about the subject matter. But it could also come about from having developed a better understanding of opposing viewpoints and moving into the perspective of their alter ego. The presumption here is that students may consider new or different perspectives on a range of issues by playing the roles of individuals who hold ideological convictions that differ from their own. As such, students' ideological positions may change as a result of the experience. In this regard, we expect a much greater effect on beliefs about the EU than on the left/right scale, as most of the students are U.S. citizens and less likely to have strong beliefs about European integration.

First, we examine the profile of simulation participants in the pre- and post- surveys. Again, each student places him or herself on a 10-point scale ranging from 1 (far left) to 10 (far right). The survey does not indicate which issues constitute the left/right spectrum, leaving it up to each student to decide for themselves. However, this question presumably captures positions on a range of economic and social issues that fall along the left/right spectrum. As displayed in column A of Table 4, for all participants before the simulation, the mean left/right self-placement score is 5.25, and the standard deviation is 2.37. The mean score of all participants after the simulation is a 5.13, and the standard deviation is 2.38. This suggests that students were slightly more left-leaning after the simulation.

The students are also asked to locate themselves along a scale of EU support (see Table 4, column B). Much European public opinion research measures attitudes along both a left/right dimension and a pro/anti-EU dimension, particularly because both pro- and anti-EU positions include groups and individuals from both the left and the right. Lower values capture a greater degree of support for the EU. On this scale, the mean score for participants before the simulation is 4.9 with a standard deviation of 2.26. The mean score for the post-simulation participants is 4.81 with a standard

deviation of 2.27, indicating that participants grew more supportive of the EU over the course of the semester preparing for the simulation.

Of course, these scores may not reveal the full extent of the change, as some students move to the right (e.g., becoming more critical of the EU) while others move to the left (e.g., becoming more supportive of the EU). Thus, we also measure the mean magnitude of all changes—we account for the total movement of each student, regardless of the direction in which they change. Across the 104 respondents who participated in the simulation, the mean change on the left/right self-placement index is 0.87 with a standard deviation of 1.04. The mean change on the EU support index is 1.46 with a standard deviation of 1.91. The latter is noteworthy given that the scale is 10 points.

With regard to subsets of students on the question of left/right ideological change, most groups move to the left over the course of the semester. The one exception to this pattern involves students who take an EU course but do not participate in the simulation. This finding reflects the fact that an EU course may address fewer left/right concerns while the simulation captures left/right issues by representing the range of political parties in the European Parliament. In the difference of means *t* test for all simulation participants, the positions of the group were more to the left at the end of the semester than at the start. However, this difference was not significant.

The same changes are captured in regard to support for the EU (again, column B of Table 4). Here, all groups became more supportive of the EU except for the students who neither took an EU course nor participated in the simulation. That result makes sense as that group of students was not even exposed to information about the EU. The difference of means *t* test also suggests that simulation participants grow more supportive of the EU. That difference is not significant, although it comes the closest to significance of all the comparisons in this survey except for knowledge. Interestingly, the group of students who only took an EU course were the ones that changed the most in the direction of supporting the EU. That may be because the simulation gives more airtime to the beliefs of Eurosceptic leaders who are disproportionately represented in the simulation.

Finally, we consider the extent to which playing an individual of a different political ideology might be related to changes in ideological views. We regress the ideological placements of the roles that each student played in the simulation on the changes in their own views over the course of the semester. The left/right positions of students' alter egos are not at all related to changes in students' left/right self-placements. However, the position of each alter ego on the EU is positively correlated with changes in students' EU self-placements over the course of the semester at the 99% confidence level. This means that more supportive alter ego positions toward the EU are associated with changes in student support for the EU, and more skeptical alter ego positions toward the EU are associated with increasing opposition to the EU. As suggested above, the greater malleability of EU positions makes sense: many students will not have thought much about the EU or have developed coherent positions on European integration prior to taking a course and/or participating in the simulation.

Discussion

Most faculty members who use simulations claim that such activities can serve as powerful learning tools. The excitement and energy that often course through

simulation rooms is not always present in traditional classroom environments. Despite the increasing use, visibility, and diversity of simulations, though, relatively few efforts have been made to conceptualize and measure the full gamut of outcomes that political science educators use simulations to promote. Among other things, the lack of comprehensive conceptualization and measurement opens questions about whether the benefits simulations outweigh the significant time and (particularly in the case of multi-institution events) monetary costs of pursuing them.

The simulation offers tentative support for the expectations that simulations serve to increase knowledge and engagement with the core subject matter. While the increase in knowledge may not be greater than that experienced by students who complete a course on the same subject, the simulation participants hold steady with their colleagues who take a non-simulation-based EU course in terms of how much is learned over the course of the semester. Of course, the survey we have used is limited to a relatively small battery of true/false questions and likely does not capture the full extent of learning that occurs in either environment. Given the emphasis that the simulation places on specific types of policy (deeply exploring, say, environmental policy or immigration policy each year), there may be greater gains in domain-specific knowledge for students who complete the simulation. At minimum, though, there does not appear to be any lost ground in the knowledge gained over the course of a semester due to the time dedicated to the simulation.

The results are more tentative around engagement/interest. In these surveys, there was not a significant difference in the pre- and post-survey results in regard to interest in the EU. Of note, prior research does find a noted increase in EU interest (Clark et al. 2017), and the 2018 survey findings appear to be an outlier amongst the years captured in this paper. Overall, anecdotal evidence suggests that many students develop or sustain an interest in international politics more broadly through the simulation. The analysis of the two proxy measures here (broader political interest and discussion of international politics) would suggest that is the case. Still, the mixed findings here suggest that the degree to which a simulation generates interest may be influenced by specific aspects of the simulation experience. Simulation organizers should not take student interest for granted and should remain conscious of aspects of a simulation that may frustrate student learning and/or engagement without offering any other benefit.

The analyses of soft skills indicates that the simulation may have the weakest effect in this area, at least when using student self-evaluations of skills as a pretest baseline. While simulation participants express the most confidence in their own public speaking and leadership skills post-survey, it is unclear if such confidence is actually due to the simulation experience and, notably, there is not a significant difference in pre- and post-results for many of these categories. These types of learning activities tend to attract students with a high degree of confidence in these areas already. Future analyses might seek to develop more objective measures of soft skills or consider exploring the extent to which learning activities affect students who express low levels of soft skills at the start of the simulation.

Our results also suggest that simulations may promote empathy, at least insofar as they shape attitudes around political phenomena for which students may not have strong prior beliefs. Students may be more likely to move into the perspective of another in circumstances where they lack strongly developed beliefs and orientations. The attitudes of simulation participants shifted far more on a pro-/anti-EU dimension

than on the traditional left/right ideological spectrum. More efforts are needed to connect any such shifts to the type of role played in the simulation. Our own future efforts will seek to determine whether such shifts move students toward the ideological position of the roles they play. Two additional points related to empathy are apposite in this context. First, there is ample room for work that examines simulations' relationship to empathy's specific attributes. To what extent do simulations encourage students to interpret the world in the ways that the people they are studying interpret it? Which specific range of others' feelings do simulations help students to access and communicate? Second, surveys that gauge empathy could use more refined measures to connect the simulation experience to the ways that students observe and respond to opposing viewpoints. A survey question measuring how respondents view their own self-defined political opponents would be one promising means toward this end.

Altogether, the results presented here suggest tentative support for ongoing institutional investments in simulations. Taking the post-survey results in isolation, the simulation participants generally demonstrated higher knowledge, more engagement, and greater confidence in soft skills than other student groups. However, the changes from the pre- and post-survey instruments are not always in the expected direction and are often not significant enough to demonstrate a change over the course of the semester. While the instrument may not always capture the types of learning or engagement that are promoted through the simulation or through coursework, the results suggest that simulation organizers may need to have more explicit discussions about the types of outcomes sought through such events.

Ultimately, we see value in continuing use of the KESE framework to assess the potential benefits of political simulations. Future efforts can improve on the survey methodology—including by administering additional post-surveys months or even years after simulation events—to better assess the extent to which simulations have a positive effect in each of these domains. Such efforts will become all the more important as financial constraints may demand that faculty better justify the costs involved in holding simulations in future years.

Note

1. The one exception was 2020, when the simulation was held virtually due to the COVID-19 pandemic.


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