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Outsourcing Learning: Is the Statecraft Simulation an Effective Pedagogical Alternative?

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Presented at the
2014 Annual Meeting of the American Political Science Association, Washington, DC, August 29, 2014.

Abstract

Although rising costs have been a general trend in higher education since the early 20th century, a fundamental restructuring of the higher education marketplace is currently underway. In recent decades students and their parents have been forced to finance college education through greater and greater debt. As a result, students and their families are increasingly demanding that institutions of higher learning provide evidence of value. Universities must now ask what methods of instruction most efficiently expand a student's knowledge base—can instruction that has been traditionally supplied in a physical classroom be delivered more effectively at lower cost through digital means? If so, how can these savings be measured and can they be propagated across an entire curriculum?

This paper examines the effects of using Statecraft, a commercially-available online simulation, in teaching international relations. The simulation was used in two semesters of an undergraduate international relations course as part of a flipped classroom pedagogy, in which Statecraft replaced lectures and other instructional activities that required a physical classroom. The study demonstrates that a significant portion of instruction can be outsourced to an online provider of standardized content with little to no negative change in pedagogical outcomes.

Keywords: international relations, teaching, pedagogy, online, simulation, Statecraft

Introduction

Simulations have long been used for a variety of pedagogical purposes that include the acquisition of disciplinary knowledge (Baranowski 2006; Tonks 2002; Brademeier and Greenblat 1981; Heitzmann 1973), peer engagement (Torney-Purta 1998), and the production of attitudinal and behavioral changes (Williams and Williams 2010; Dorn 1989; Tamminga 1977). The perceived ability of simulations to target students' cognitive, behavioral and emotional domains makes them highly attractive pedagogical tools (Davidson et al. 2009:153). A wide range of simulations have been used in international relations instruction; these range from a simple classroom demonstration of Prisoner's Dilemma (Raymond 2011 and Asal 2005) to complex role-playing exercises such as ICONS (International Communication & Negotiation Simulations) and the Global Problems Summit focusing on international negotiation and conflict resolution (Starkey and Blake 2001 and Krain and Lantis 2006, respectively).

While research on pedagogical simulations in political science is part of a broader literature that advocates for active and experiential instructional techniques (e.g., Crossley-Frolick 2010; de Freitas 2006), their efficacy at enabling students to achieve desired learning outcomes has not been comprehensively validated, in part due to the frequent failure to properly align simulations with course learning objectives or assessment regimes (Raymond and Usherwood 2013). As Krain and Lantis (2006:399, 400) have shown, "very few studies confirm our experiences (and convictions) that [simulation] exercises are truly effective methods for teaching political science and international relations" because such exercises "have remained generally untested in any rigorous fashion."

My experience with simulations in undergraduate international relations courses exemplifies this problem. A Middle East crisis simulation used in 2006 consumed substantial amounts of time and effort; however, there were no statistically significant improvements in exam scores among simulation participants compared to students who received traditional lectures and assignments. Although students indicated that they thought the simulation was a useful educational experience, participation in the simulation was associated with lower scores on students' evaluations of my teaching (Raymond 2010).

In 2009, I used a role-playing simulation of my own design that I called *Europe1914*. While students appreciated the degree of peer interaction afforded by *Europe1914*, students' exam scores were no higher than those from 2008 in a section that did not include a simulation (Raymond 2012). I used *Europe1914* a second time when I next taught the course in 2011, and while mean exam scores were higher than in 2009, they remained lower than mean scores from 2008.

In 2012, I began using the *Statecraft* simulation. Responses to a post-simulation written debriefing indicated that *Statecraft* was very well received by students, especially in terms of helping them understand international politics and experience satisfying educational outcomes (Raymond 2014). In the two iterations of the course in which I have used *Statecraft*—Fall 2012 and Fall 2013—students readily identified parallels between the simulation, the real world, and international relations theories in writing assignments, debriefings, and final exams.

Statecraft

Statecraft resembles many other simulations that have been used to teach international relations. It assigns tangible rewards in the form of points to participants if their teams achieve particular goals, but competition for scarce resources, conflicting domestic and international interests, and the varied personalities and values of individual participants make these goals difficult to achieve. The teams themselves represent fictional nation-states, and team members are assigned roles that nominally have specific responsibilities within each nation-state's government, such as president or minister of defense. Prior to the start of *Statecraft*, members of each team select a government type (such as constitutional monarchy or military dictatorship), and two country attributes (industrial, green, militaristic, pacifist, or scientific). Government type and attributes affect the incentive structure for each team in the simulation.

The simulation unfolds through a series of turns; in each turn, the nation-states produce limited amounts of gold, food, steel, scientific knowledge, and oil—resources that can be used to build military capabilities or domestic structures, or be traded with other nation-states. Teams can also invest resources

in research that speeds the acquisition of prerequisite technologies; for example, a nation-state must reach the technological level of “advanced medicine” before it can begin building hospitals.

Statecraft also rates each nation-state on the basis of domestic social characteristics such as health, welfare, environment, safety, education, and culture; these ratings can be improved with the purchase of hospitals, schools, welfare offices, and prisons. Each team must also try to manage the approval ratings of six factions or interest groups (capitalists, socialists, environmentalists, nationalists, civil libertarians, and intellectuals) that exist within its country’s population. For example, if a team decides to build a factory, which increases gold production but also increases pollution, the nation-state’s capitalist faction will be pleased but the approval rating of environmentalists will fall. If any faction’s approval rating decreases to thirty-five percent, it will engage in demonstrations, riots, and strikes that consume the nation-state’s resources. In this respect, *Statecraft* embodies the principle of the two-level game faced by political leaders trying to balance competing domestic and foreign policy interests (Putnam 1988).

One of the main advantages of *Statecraft* for the course instructor is its system of automated record keeping. As teams execute trades, purchase structures, launch military attacks, and form treaties, the website tabulates resource levels, approval ratings of domestic factions, and accumulated points for each team in real time. Students also communicate with each other through the website, which facilitates the ability of participants to negotiate and reach decisions outside of the classroom.

The Course

The context for this study is an introductory international relations course that I taught in the Fall semesters from 2008 through 2013. No simulation was employed in 2008, I used *Europe1914* in 2009 and 2011 (I did not teach the course in 2010), and used *Statecraft* in 2012 and 2013. Because simulations are believed to be most effective as teaching tools when they include robust mechanisms for preparation, interaction, and debriefing (Asal and Blake 2006: 2), content of the course varied over time. The 2008 section can be described as more traditional in format, with two books (Joachim Remak, *The Origins of*

World War I: 1871-1914 and John G. Stoessinger. *Why Nations Go To War*), additional readings, brief written responses to reading assignments, three exams, and a major research paper in which students were asked to apply basic international relations theories and concepts to an historical event. Because of the incorporation of *Europe1914* into the class in 2009, I eliminated one of the three exams—leaving a midterm and a final—and made the subject of the major paper an application of international relations concepts to what had occurred in the simulation. This organization was maintained for the 2011 section. In 2012, with the replacement of *Europe1914* with *Statecraft*, I substituted Barbara Tuchman's *The March of Folly: From Troy to Vietnam* for the book by Stoessinger. I also dropped the midterm exam in favor of a series of quizzes spaced throughout the semester. In 2013, I replaced *March of Folly* with other readings, used *Statecraft* a second time, and added a simulation on Haiti at the end of the semester (Beers, Raymond, and Zappile 2014).

In sum, although the number of writing assignments and tests waxed and waned over time, the learning objectives and types of assignments in the course remained consistent over the years with only two exceptions. First, sections taught after 2008 included a simulation that occupied several classes over a multi-week period. Second, because class time became occupied by a simulation, lectures became fewer, briefer, and simpler. The presentation of basic disciplinary concepts that had occurred in lectures was instead moved out of class by means of reading assignments and quizzes. This process also substantially decreased the time and effort I had to expend on teaching preparation once out-of-class assignments were created.

Data Analysis

Enrollments in different sections of the course varied widely from a low of thirteen to a high of thirty-four while the mean final grade for all sections fell within a band of B to B+. Uneven enrollment and lack of statistically significant variation in grades from one condition to another caused me to instead examine scores on student evaluations of teaching surveys. It is debatable whether student evaluations of teaching are, in and of themselves, valid or reliable indicators of what students have learned. Research

indicates that teaching evaluations can vary by instructor gender and rank, whether a course is required or an elective, class size, final course grades, and other characteristics (Johnson et al. 2013; Stehle et al. 2012). Other studies have found that students are quite able to distinguish between learning and being entertained in the classroom (Peer and Babad 2014). However, given the subjectivity inherent in assessing students' content knowledge and skills in political science, and the pervasiveness of grade inflation across undergraduate higher education in the USA, students' evaluations of teaching could be just as useful an indicator of learning as their final grades. At minimum, student evaluations likely point toward the degree to which students have been interested in and engaged with the content of any particular course. Interest and engagement are in and of themselves factors that affect learning.

Evaluations from the different sections of the course were clustered according to experimental treatment as shown in Table 1.

Year	Treatment	Total Enrollment	Completed Evaluations (N)
2008	None	22	13
2009 and 2011	<i>Europe1914</i>	61	48
2012 and 2013	<i>Statecraft</i>	47	32

The survey instrument used for student evaluation of teaching in this course contained the following questions:

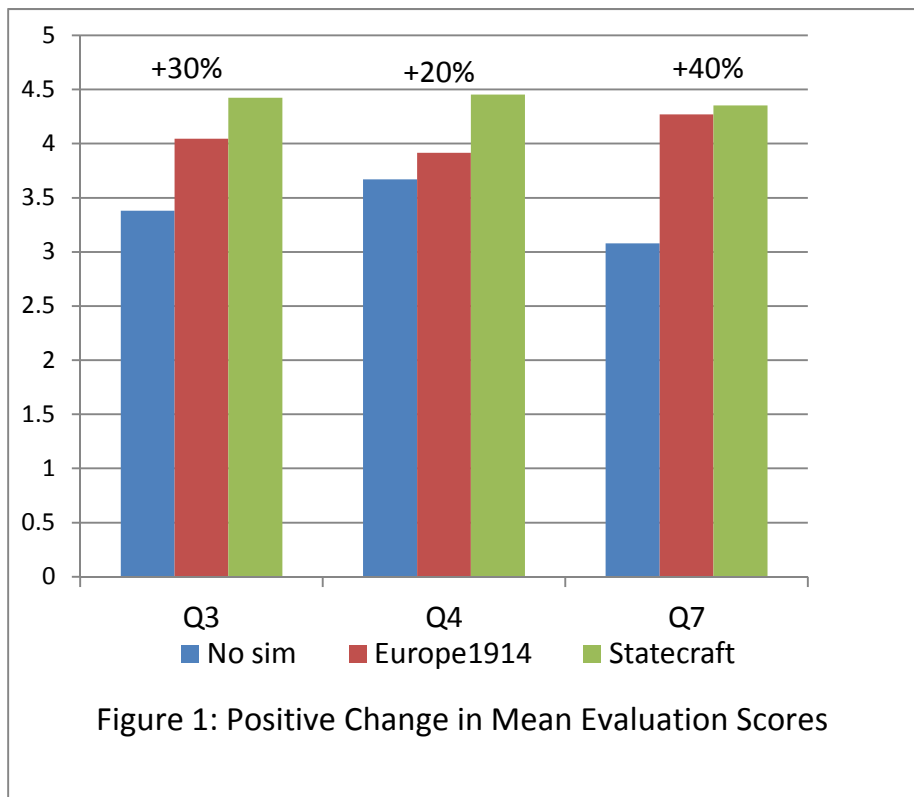
- Q1. The instructor was organized and prepared for class.
- Q3. The instructor's teaching helped me learn the material.
- Q4. The instructor's presentation of material was clear.
- Q5. The instructor displayed enthusiasm for teaching and for the course material.
- Q6. The instructor is knowledgeable in the subject matter.
- Q7. The materials used in this course (textbook, workbook, handouts) were appropriate and useful.
- Q8. The grading system for the course was clear.
- Q9. I received timely and helpful feedback about my work.
- Q10. I felt free to express my views and ask questions.
- Q11. The instructor made help available as needed.
- Q12. The course content was challenging.
- Q13. I learned a great deal in this course.
- Q14. This course helped me to become a more independent thinker in this area.

The mean scores for Q1, Q8, and Q10 to Q12 (“The instructor was organized and prepared,” “grading system was clear,” “I felt free to express my views and ask questions,” “instructor made help available,” and “course content was challenging,” respectively) were lower for *Statecraft* than for the control condition, but by only 1-4 percent. The only questions in this group where *Statecraft* scored lower than *Europe 1914* were Q11 and Q12, by 4 percent and 10 percent, respectively. For Q11, *Europe1914* had a higher mean score than the control condition did, while for Q12 its mean score was lower.

For Q9, Q13, and Q14 (“I received timely and helpful feedback,” “I learned a great deal,” and “This course helped me to become a more independent thinker,” respectively) *Statecraft* received mean scores that were higher than for the control condition by 10-14 percent. Mean scores for *Statecraft* on Q5

(“Instructor displayed enthusiasm”) and Q6 (“Instructor was knowledgeable”) were 2-3 percent higher than for the control condition.

The largest differences in mean scores occurred with Q3, Q4, and Q7 (“instructor’s teaching helped me learn the material,” “instructor’s presentation of material was clear,” “materials used were appropriate and useful”). On these questions, mean scores for Statecraft were 20-40 percent higher than for the control condition (Figure 1).



If teaching evaluations are assumed to be an indirect indicator of student learning outcomes, it appears that *Statecraft* is an effective pedagogical tool. On most teaching evaluation questions, the mean scores generated by students who had participated in *Statecraft* were higher than for the course section that did not have a simulation and for the two sections that included *Europe1914*. *Statecraft* was associated with dramatic increases in mean scores for “The instructor’s teaching helped me learn the material,” “The instructor’s presentation of material was clear,” and “Materials used in this course were

appropriate and useful.” Also, mean scores on the questions “I learned a great deal in this course” and “This course helped me to become a more independent thinker in this area” were 13-14 percent higher for sections that included *Statecraft* than sections that did not include any simulation.

Perhaps the most significant finding of this study is that students perceived the classes in which I lectured the least as the most valuable. Replacing a large amount of traditional instruction with digital content had no apparent negative effects on student attitudes or grades. Although students participated in *Statecraft* within the classroom, the vast majority of their interaction occurred online via the simulation’s website. This phenomenon makes me wonder what elements of my teaching can be moved online or abandoned altogether so that the increasingly limited and valuable time students and I spend together in the physical classroom can be most effectively utilized. The same question was asked in a recent study by Ithaca S+R and the University System of Maryland; the study found that student in hybrid courses did as well as or slightly better than students in traditionally-organized courses in terms of pass rates and learning assessments, despite spending only about half as much time in the physical classroom (Griffiths et al. 2014: 4).

Conclusions

Pedagogical practices are often viewed from the perspective of student “demand”—the student’s learning needs, usually institutionally- or disciplinarily-defined. These needs are hypothetically met by delivering instruction in a customary manner. But there is also a “supply” side to the equation that originates with the instructor. Supply factors are all the intrinsic and extrinsic motivations that impinge upon an instructor’s decisions about how and why to teach. They include personal utility (“Is this worth my time and effort? Will this make my time in the classroom more enjoyable?”), the effect of feedback from students and colleagues upon the instructor’s prospects for continued employment, and even whether the instructor encountered tortuous traffic conditions on the commute to campus that morning. Some days we are simply more tired than others.

Finally, there is what can be called the “process” side to teaching and learning, encapsulating other factors that contribute to how, how much, or even whether learning occurs. The process of learning is often mediated by institutional and social environments, many of which are shared by students and instructors. While it is possible for instructors to teach and for students to learn in a 95°F classroom filled with the sound of lawnmowers, it is not easy. Similarly, a student who sits in a classroom unaware of the importance of note-taking, concerned about a disabled parent, and deprived of sleep because of the need to work evenings to pay for tuition is not as likely to benefit from an innovative teaching method as a student who comes from a higher rung on the socioeconomic ladder. The former student is, in fact, more likely to drop out of college altogether, to be replaced by a similar student in the instructor’s classroom the following year. A conveyor belt of anonymous faces and no indication that what one does is in any way meaningful is a powerful demotivator for even the most dedicated teacher. It is therefore important to engage in practices that have a strong positive influence on all three sides of the pedagogical equation. Simulations like *Statecraft*, which can positively affect student attitudes toward learning and instructor attitudes toward teaching, are one method of accomplishing this.

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