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Teaching a Hybrid Administrative Law Simulation Class Using *Jurassic Park*

Roberto L. Corrada

Introduction

For more than a decade, educators and scholars have been calling for changes in methods of instruction, especially in higher education, based on developments in the field of learning science.¹ This has been true for legal education as well, but additionally based on fundamental shifts in the way legal employers, especially law firms, hire and train new lawyers.² These suggested changes for legal education include more emphasis on professional skills training, leadership development, and teamwork.³ While there has been no dearth of writing about the need for change in legal education, and even about specific outcomes or

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1. See generally JAMES M. LANG, *SMALL TEACHING: EVERYDAY LESSONS FROM THE SCIENCE OF LEARNING* (2016); PETER C. BROWN ET AL., *MAKE IT STICK: THE SCIENCE OF SUCCESSFUL LEARNING* (2014); BENEDICT CAREY, *HOW WE LEARN* (2014); L. DEE FINK, *CREATING SIGNIFICANT LEARNING EXPERIENCES: AN INTEGRATED APPROACH TO DESIGNING COLLEGE COURSES* (2013); *HOW PEOPLE LEARN: BRAIN, MIND, EXPERIENCE, AND SCHOOL* (John D. Bransford et al., 2000).
2. See, e.g., Scott A. Westfahl & David B. Wilkins, *The Leadership Imperative: A Collaborative Approach to Professional Development in the Global Age of More for Less*, 69 *STAN. L. REV.* 1667 (2017); WILLIAM M. SULLIVAN ET AL., *EDUCATING LAWYERS: PREPARATION FOR THE PROFESSION OF LAW* 12-14, 27-29 (2007).
3. See Westfahl & Wilkins, *supra* note 2, at 1697; SULLIVAN ET AL., *supra* note 2, at 12-14, 27-29.

goals for legal education, there has been comparatively much less writing about how specific methods of instruction should be modified to achieve these new outcomes. This essay outlines in some detail how use of a particular simulation approach to a traditional law school class, administrative law, can serve to meet the new demands on legal education going forward.

The Jurassic Park administrative law class is a simulation requiring students to learn administrative law while at the same time deploying what they've learned to collectively write a statute regulating the release of dinosaur DNA into the biosphere. The novel *Jurassic Park* serves as a fact foundation for the class. Students are charged with deciding how to regulate the area, and then writing a law that deals with (and presumably fixes) the problems arising in the novel. Fifty percent of the class grade is for work on the statute. Some of that fifty percent is for the group product and the other part is for individual student work on the project. The other fifty percent of the class grade is traditional doctrinal class credit for class participation (which can include contributions on the discussion board) and for performance on an examination given toward the end of the class or as a final examination.

The Professional Part-Time J.D. Program at the University of Denver Sturm College of Law is hybrid. Two-thirds of each course is taught in a classroom, live. The other one-third of each course is online, asynchronous.⁴ The active learning approach described here and used in the hybrid program is what I call a "whole-course indeterminate simulation."⁵ The simulation is played out over the entire semester, with few constraints about where the simulation will lead and no prescribed result.⁶ I have developed, used, and written about simulations in labor law and administrative law classes for several years.⁷

Teaching in a hybrid format, which then converted to a fully online format due to the COVID-19 pandemic, showed that current technology has made simulations even more feasible as a way of training law students because technology has improved students' ability to engage in collaborative group work, the key to a successful simulation. Technologies made popular during COVID-19, including

4. *Professional Part-Time JD Program*, STURM COLL. L. (2022), <https://www.law.du.edu/academics/programs-degrees/jd-degrees/professional-part-time-jd-program> (describing the structure of the Professional Part-Time J.D. Program at the University of Denver Sturm College of Law).
5. Roberto L. Corrada, 'Ill-Structured' Simulations in Two American Law School Classes: *Labor Law and Administrative Law*, in LEGAL EDUCATION, SIMULATION IN THEORY AND PRACTICE 243-51 (Caroline Strevens et al. eds., 2014); Roberto L. Corrada, *A Simulation of Union Organizing in a Labor Law Class*, 46 J. LEGAL EDUC. 445 (1996). For the Institute for the Advancement of the American Legal System's (IAALS) Educating Tomorrow's Lawyers (ETL) Project Course Portfolios, see *Curricular Innovation*, INST. FOR THE ADVANCEMENT OF THE AM. LEGAL SYS. (IAALS) (2021), <https://iaals.du.edu/projects/law-school-curriculum#tab=course-portfolios> (describing not only my simulation courses, but a host of other similar law school simulation courses created by other U.S. law professors (ETL Fellows) across a wide variety of subjects).
6. Corrada, *supra* note 5. Whole-course indeterminate simulations are not particularly difficult to create. They initially require a large body of facts that can serve as a case narrative for the class. Both novels and movies can work.
7. *See Supra* note 5 and accompanying text.

Zoom, Kaltura, Microsoft Teams, OneDrive, and Google Docs, facilitate robust student collaboration. However, the technology does not automatically come packaged with a pedagogically sound approach to group work. This essay will introduce a way to enhance learning with group and collaborative work in the context of law school classes in general and will demonstrate how this method works in a specific law school simulation class.

I. Welcoming Technology: Simulations and Group Work

A. *The Need for Law School Simulation Classes*

In 2007, the Carnegie Foundation for the Advancement of Teaching released its multiyear study of teaching and learning in law school. The report, titled *Educating Lawyers: Preparation for the Profession of Law* (Carnegie Report), identifies three apprenticeships that make up the framework for legal education: 1) legal analysis, 2) practical skills, and 3) professional identity formation.⁸ Although these three apprenticeships are found in various forms in all law schools, they are seldom integrated with one another.⁹

While the Carnegie Report seeks explicitly to integrate knowledge/analysis, experience/skills, and professional identity formation, it implicitly seeks to bring legal education more in line with discoveries about how the brain works. According to the Carnegie Report,

Skillful practice, whether of a surgeon, a judge, a teacher, a legal counselor, or a nurse, means involvement in situations that are necessarily indeterminate from the point of view of formal knowledge. Professional practice . . . depends on judgment in order to yield an outcome that can further the profession's purposes. [T]he mark of professional expertise is the ability to both *act and think well in uncertain situations*. The task of professional education is to facilitate novices' growth into similar capacities to act with competence, moving toward expertise.¹⁰

For law schools, this insight from the Carnegie Report suggests that fairly early in their legal education, students should begin to apply formal knowledge to situations that require the use of judgment, perhaps especially the nuanced judgment required in the real context of lawyering. Along these lines, the Carnegie Report further states:

Research suggests that learning happens best when an expert is able to model performance in such a way that the learner can imitate the performance while

8. SULLIVAN ET AL., *supra* note 2, at 12-14, 27-29.

9. Consequently, the *Carnegie Report* recommendations "attempt to imagine a more capacious, yet more integrated, legal education. [The] primary concern is both curricular (in particular, how to use the second two years of law school more effectively) and pedagogical (how to bring teaching and learning of legal doctrine into a more fruitful dialogue with the pedagogies of practice)." *Id.* at 12.

10. *Id.* at 8-9.

the expert provides feedback to guide the learner in making the activity his or her own This requires learning the “subject matter” of law . . . , but in a way that is already structured for performance *In many professional fields, though less so in law, these insights into learning have given rise to the widespread use of simulation as a form of teaching & learning.*¹¹

Breakthroughs in the science of learning and in educational theory provide some guidance for how law schools might think differently, at least about their upper-class program.¹² Students might be able to learn about substantive areas of law while also expanding their ability to think critically about law and legal situations and learning how to practice. The upper-class law curriculum might better focus on how to make meaning or understand it, on how to evaluate evidence and produce it, and on how to self-evaluate argument and thinking. These goals are hard to accomplish merely by trying to transfer the teacher’s own experience directly into the brains of students, mostly through lecture or even some Socratic inquiry.¹³

The use of active and collaborative learning to forward metacognitive goals in a simulation-based learning environment holds much potential for better learning, as suggested by developments in scientific research about how people learn. This is particularly true when it can be accomplished in a way that integrates the three Carnegie apprenticeships: legal analytical thinking, practice skills, and formation of professional identity.

Simulations and other active learning approaches are a superior means of moving novices toward expert competency. The live-client clinic is the best approach, given that clinics have students practice law in the real world. Simulations, however, have proved to be extremely effective in preparing law students for the practice of law and as a middle step between the first-year law classroom and an upper-class clinic or externship experience.¹⁴ Moreover, whereas the

11. *Id.* at 26 (emphasis added).

12. See, e.g., Louis N. Schulze, Jr., *Using Science to Build Better Learners: One School’s Successful Efforts to Raise Its Bar Passage Rates in an Era of Decline*, 68 J. LEGAL EDUC. 230 (2019); Jodi S. Balsam, *Teaming Up to Learn in the Doctrinal Classroom*, 68 J. LEGAL EDUC. 261 (2019); Melissa H. Weresh, *Assessment, Collaboration, and Empowerment: Team-Based Learning*, 68 J. LEGAL EDUC. 303 (2019); Judith Welch Wegner, *Reframing Legal Education’s “Wicked Problems,”* 61 RUTGERS L. REV. 867 (2009) (describing developments in “learning sciences” and adult learning theory and their relevance to legal education); Anthony S. Niedwiecki, *Lawyers and Learning: A Metacognitive Approach to Legal Education*, 13 WIDENER L. REV. 33, 33 (2006) (examining importance of teaching law students metacognitive skills); Filippa Marullo Anzalone, *It All Begins With You: Improving Law School Learning Through Professional Self-Awareness and Critical Reflection*, 24 HAMLINE L. REV. 324, 359–69 (2001) (describing research in human cognition and learning styles and its application to legal education); David I.C. Thomson, *LAW SCHOOL 2.0*, at 31–35, 64, 125–26 (2009).

13. PAULO FREIRE, *PEDAGOGY OF THE OPPRESSED* 71–86 (2002).

14. Erwin Chemerinsky, *Keynote Speech: Reimagining Law Schools*, 96 IOWA L. REV. 1461, 1468–69 (2011) (reinventing legal education should mean incorporating skills training, especially through simulations: they play an important role and should be a core part of the second year); MICHAEL HUNTER SCHWARTZ ET AL., *WHAT THE BEST LAW TEACHERS DO* 20–21, 133, 175, 202, 205, 206, 214, 226 (2013); WILLIAM M. SULLIVAN ET AL., *EDUCATING LAWYERS: PREPARATION*

efficacy of clinics may be limited to some subject areas, simulations can be used efficiently in virtually any type of doctrinal class. In *Creating Significant Learning Experiences*,¹⁵ L. Dee Fink details six kinds of significant learning experiences: 1) foundational knowledge (student ability to understand and remember specific information and ideas); 2) application (in law, the application of foundational knowledge to particular factual problems); 3) integration (making connections between ideas, or, in law, doctrines or rules); 4) the human dimension (learning about how students interact with other students and how other students interact with them); 5) caring (learning that leads to more caring about the subject matter); and 6) learning how to learn (learning about how to be a better student or how to become a self-directed learner).¹⁶ An excellent doctrinal law school class may impart foundational knowledge, some application, and some integration, but a simulation that requires students to work in groups, like the one described in this essay, can enhance application as well as add the human dimension, caring, and learning how to learn, especially if it is “ill-structured” or “indeterminate.”¹⁷

Scott Westfahl and David Wilkins, in their article *The Leadership Imperative: A Collaborative Approach to Professional Development in the Global Age of More or Less*,¹⁸ make the case for change in law school curriculum even more forcefully. They argue that fundamental shifts in the way that large law firms do business require law schools to adapt. Though law schools do a good job of teaching adaptive critical thinking skills and technical legal knowledge, they fall short in, and are even resistant to, teaching students professional legal skills and ways to tap

FOR THE PROFESSION OF LAW (2007); Corrada, *supra* note 5; Roberto L. Corrada, *A Simulation of Union Organizing in a Labor Law Class*, 46 J. LEGAL EDUC. 445 (1996); Thomson, *supra* note 12, at 31–35 (simulations effective for teaching millennials). *But see* Thomson, *supra* note 12, at 125–26 (barriers to using simulations in law teaching).

15. L. DEE FINK, CREATING SIGNIFICANT LEARNING EXPERIENCES: AN INTEGRATED APPROACH TO DESIGNING COLLEGE COURSES (2013).
16. *Id.* at 43–61.
17. An “ill-structured” or “indeterminate simulation” simply puts into place a complex scenario that has no predetermined outcome or solution. Those engaging the scenario can proceed in any number of different ways. There may be a goal, but no set way to go about achieving it. In this way, the simulation is not “neat” or “packaged.” Complete or packaged scenarios do not reflect the nature of the true practice of law. Dean Erwin Chemerinsky explained it this way: “I strongly believe that there are educational experiences that can come from representing real people that can never come from simulation or in any classroom. Simulations, no matter how many wrinkles, are just too neat and packaged. A real client exposes students to sociological and practical dimensions that otherwise cannot be gained.” Chemerinsky, *supra* note 14, at 1467–68. But “ill-structured” or “indeterminate” simulations, while maybe not at the level of uncertainty as a live client problem, can come a lot closer to replicating real-world problems than most simulations engineered to achieve a certain result—the ones that are “too neat and packaged.” Corrada, *supra* note 5; Sameer M. Ashar, *Deep Critique and Democratic Lawyering in Clinical Practice*, 104 CAL. L. REV. 201, 224 (2016) (“Vexing ‘ill-structured’ social problems ought to serve as the core vehicles through which students learn about law and lawyering.”).
18. Westfahl & Wilkins, *supra* note 2.

into opportunity-creating professional networks.¹⁹ They maintain that law firms increasingly solve “incredibly complex problems.”²⁰ Accordingly, corporate clients of law firms are now “calling for their lawyers to have more business skills, project management skills, and the ability to integrate the contributions of other professionals involved in clients’ matters.”²¹

Westfahl and Wilkins, in arguing for new model of legal education, maintain that law schools must teach law students three critical capacities: technical legal skills and expertise, professional skills adaptable to any environment, and ways to engage opportunity-generating professional networks, including developing connections with other students within their own law school classes.²² They recommend and emphasize that law schools must recognize that lawyer development is key.²³ Accordingly, law students must learn to work with others collaboratively and in context.²⁴ Law schools must increasingly teach students about working in teams, allow them to work in teams, and provide students time for reflection on that kind of work.²⁵ As Westfahl and Wilkins emphasize:

To help students build deeper, trust-based relationships that endure beyond graduation, law schools should introduce significantly more team-based instruction and experiences (including within clinics and workshops), together with team launch, feedback, and reflection tools. The experience of working together on substantive issues and learning to appreciate each other’s strengths will enhance the likelihood that students develop more robust networks among their peers.²⁶

Whole-course indeterminate simulations, like the one described in this essay, can deliver the kinds of experiences outlined by Westfahl and Wilkins. Teamwork is a critical part of any simulation involving working on complex legal problems, especially simulations involving drafting regulatory frameworks.

Parker Palmer, in his classic work *The Courage to Teach*,²⁷ describes at some length the benefits of active-learning, constructivist approaches to teaching. As he says, “[A]ssumptions that students are brain-dead leads to pedagogies that deaden

19. *Id.* at 1689-91.

20. *Id.* at 1693-94.

21. *Id.* at 1697.

22. *Id.* at 1702.

23. *Id.* at 1705-06.

24. *Id.* at 1707, 1711. See generally ELIZABETH MERTZ, THE LANGUAGE OF LAW SCHOOL: LEARNING TO “THINK LIKE A LAWYER” (2007); see also Thomson, *supra* note 12, at 64.

25. Westfahl & Wilkins, *supra* note 2, at 1708.

26. *Id.* at 1714, citing Carolyn O’Hara, *What New Team Leaders Should Do First*, HARV. BUS. REV. (Sept. 11, 2014), <https://hbr.org/2014/09/what-new-team-leaders-should-do-first> (emphasizing the importance of building rapport and sharing goals among team members at the outset of a team project).

27. PARKER J. PALMER, THE COURAGE TO TEACH: EXPLORING THE INNER LANDSCAPE OF A TEACHER’S LIFE (2017).

their brains. When we teach by dripping information into their passive forms, students who arrive in the classroom alive and well become passive consumers of knowledge....”²⁸ Although Socratic inquiry is more active than lecturing, many law school classes, by sheer size and volume of reading, fall far short of the Socratic ideal. Indeed, with the increased use of PowerPoint to convey content, Socratic inquiry and group discussion are further lessened.²⁹ Law school classes often operate within Palmer’s objectivist model of knowing, in which professors are the experts who possess special access to the object—the law—and through whom amateurs, students, must go to get to the object.³⁰ By contrast, in what Palmer dubs “the community of truth,” the student plays a more active role, with plenty of student-to-student interaction along with student-to-professor dialogue.³¹ In this model, the law becomes the subject of study and is equally accessed by all.³²

28. *Id.* at 42.

29. Paul Ralph, *The Conversation, Universities Should Ban PowerPoint. It Makes Students Stupid and Professors Boring*, BUS. INSIDER (Aug. 25, 2017); Rachel G. Stabler, *Screen Time Limits: Reconsidering Presentation Software for the Law School Classroom*, 23 J. LEGAL WRITING INST. 173 (2019); James B. Levy, *Teaching the Digital Caveman: Rethinking the Use of Classroom Technology in Law School*, 19 CHAP. L. REV. 241 (2016); Ramon Cladellas Pros et al., *Effects of the PowerPoint Methodology on Content Learning*, 9 INTANGIBLE CAP. 184, 193 (2013); Marc Isseks, *How PowerPoint Is Killing Education*, EDUCATIONAL LEADERSHIP 75 (2011) (“[A] PowerPoint presentation conveys to students that there are only two types of information: things we need to know (what is on the slides) and things we do not need to know (everything else). Faced with that visual cue, only the bravest—or brightest—students will challenge the rigidity of the presentation. Thus, facts travel from the teacher, to the PowerPoint slide, to the students’ notes with little or no opportunity for discussion, analysis, or evaluation.”); Russell J. Craig & Joel H. Amernic, *PowerPoint Presentation Technology and the Dynamics of Teaching*, 31 INNOVATIONS IN HIGHER EDUC. 147 (2006); Paul L. Caron & Rafael Gely, *Taking Back the Law School Classroom: Using Technology to Foster Active Student Learning*, 54 J. LEGAL EDUC. 551 (2004); Douglas L. Leslie, *How Not to Teach Contracts, and Any Other Course: PowerPoint, Laptops, and the Casefile Method*, 44 ST. LOUIS U. L.J. 1289, 1304 (2000). *Cf.* Deborah J. Merritt, *Legal Education in the Age of Cognitive Science and Advanced Classroom Technology*, 14 B.U. J. SCI. & TECH. L. 39 (2008). *See generally* EDWARD R. TUFTE, *THE COGNITIVE STYLE OF POWERPOINT: PITCHING OUT CORRUPTS WITHIN* (2006).

30. PALMER, *supra* note 27, at 102–09.

31. *Id.* at 101.

32. *Id.* at 102–09. Palmer identifies six paradoxical tensions to build into the teaching and learning space. They are neither prescriptive nor exhaustive, but indeterminate simulations executed well could create and sustain these paradoxes, which enable deep learning to take root.

1. *The space should be bounded and open.* (Space without boundaries is not space; it is a chaotic void. However, it must remain open to the many paths down which discovery may lead, to the surprises that always come with real learning. If boundaries remind us that our journey has a destination, openness reminds us that there are many ways to reach that end.)

2. *The space should be hospitable and “charged.”* (A learning space should be open, safe, trustworthy, and free, and also filled with topics of significance that require risk-taking and vulnerability.)

3. *The space should invite the voice of the individual and the voice of the group.* (The group must learn to listen to individuals with care. A group voice emerges through honest dialogue. Students learn to speak their own thoughts about the subject and to listen for collective wisdom that

Coincidentally, the type of group or team learning that educational experts are suggesting for law school, embodied by the whole-course indeterminate simulation described in this essay, are exactly the types of experiences that make for effective online classes.³³ “There is strong support for the supposition that the social phenomenon of community may be put to good use in the support of online learning. This is well supported by theories of learning that highlight the role of social interaction in the construction of knowledge.”³⁴ By learning together in community, students deepen their learning experience by testing out new ideas in a supportive group and receiving critical and constructive feedback.³⁵ Rubrics for online teaching and learning all emphasize the student-

may influence their ideas and beliefs.)

4. *The space should honor the “little” stories of the students and the “big” stories of the disciplines and traditions.* (Personal experiences can help students translate abstractions into realities. The traditions and “big” stories of disciplines contain universal and archetypal lessons to help fend off narcissism by framing personal experiences and providing meaning.)

5. *The space should support solitude and surround it with the resources of community.* (Students need solitude, time to reflect and absorb content and ideas. However, learning also demands community—a dialogical exchange in which our ignorance can be aired, our ideas tested, our biases challenged, and our knowledge expanded.)

6. *The space should welcome both silence and speech.* (A silent classroom doesn’t automatically indicate something has gone wrong; it could be that students are processing and reflecting. Dialogue is essential to learning, and silence is a precursor to the inner work students must do to internalize their learning. Why would students think their own thoughts in the silence if they know professors will invariably fill it with thoughts of their own?)

Id. at 76–85.

33. See, e.g., LINDA B. NILSON & LUDWIKA A. GOODSON, *ONLINE TEACHING AT ITS BEST: MERGING INSTRUCTIONAL DESIGN WITH TEACHING AND LEARNING RESEARCH* (2018); RENA M. PALOFF & KEITH PRATT, *THE EXCELLENT ONLINE INSTRUCTOR: STRATEGIES FOR PROFESSIONAL DEVELOPMENT* 14 (2011) (“The excellent online instructor incorporates collaborative work into the design and delivery of an online class.”); Thomson, *supra* note 12, at 129–31.
34. PALOFF & PRATT, *supra* note 33, at 9; NILSON & GOODSON, *supra* note 33, at 12–13; JAMES R. DAVIS & BRIDGET D. AREND, *FACILITATING SEVEN WAYS OF LEARNING: A RESOURCE FOR MORE PURPOSEFUL, EFFECTIVE, AND ENJOYABLE COLLEGE TEACHING* (2013); C. Brook & R. Oliver, *Online Learning Communities: Investigating a Design Framework*, 19 AUSTRALIAN J. EDUC. TECH. 150 (2003); Arthur W. Chickering & Zelda F. Gamson, *Seven Principles for Good Practice in Undergraduate Education*, AAHE BULLETIN 3–7 (March 1987), <https://www.aahea.org/articles/sevenprinciples1987.htm>.
35. PALOFF & PRATT, *supra* note 33, at 9; Barbara Means et al., *The Effectiveness of Online and Blended Learning: A Meta-Analysis of the Empirical Literature*, 115 TCHRS. COLL. REC. 1–47 (2013) (“SRI’s Center for Technology and Learning did a meta-analysis of over 100 empirical studies of online learning, contrasting learning and face-to-face conditions with learning and online and blended conditions. They found that students in the blended conditions performed better than students in the fully face-to-face conditions. The interaction that best predicted positive student affect toward their experience was student to student interaction.”); Vrasidas Charalambos et al., *The Design of Online Learning Communities: Critical Issues*, 41 EDUC. MEDIA INT’L, 135, 135–43 (2004).

student connection and student interactivity, suggesting this type of interaction in a faculty-facilitated model is an essential best practice for online classes.³⁶

B. Working with Groups: Making Them Effective

Most simulations involve heavy collaboration, requiring students to work in groups. Both students and teachers have shied away from group learning experiences: students don't like them because some of them in a given group may "free-ride" on the work of others, and teachers feel they cannot be sure all students are contributing equally. These are legitimate concerns, because group projects are often poorly planned. Usually, students are simply told to go off and work in a group to deal with an assigned problem. However, with some planning, group experiences can lead to significant learning experiences. In their work on group learning effectiveness described in *An Overview of Cooperative Learning*,³⁷ Roger T. and David W. Johnson show how groups can be established and assessed in ways that will promote cooperation and equal contribution. They identify five critical elements of cooperative learning: 1) clearly perceived positive interdependence; 2) considerable promotive (face-to-face) interaction; 3) clearly perceived individual accountability and personal responsibility to achieve the group's goals; 4) frequent use of relevant interpersonal and small-group skills; and 5) frequent and regular group processing of current functioning to improve the group's future effectiveness.³⁸ The most important of these elements are the first and the third.

With respect to positive interdependence, most professors who require students to work in groups require the group to produce some document or solution to a problem, which is graded. This may create some interdependence, in that it provides an incentive for everyone to produce the best result and achieve the best grade possible. The problem with this approach is that the interdependence is not necessarily positive, in the sense that some students within the group may leave the work to others. The ones doing the work will invariably pick up the slack to ensure the group grade is good. According to Johnson and Johnson, though, to make those within the group *positively* interdependent, the group must be set up so that all the students believe that they "sink or swim together."³⁹ This can be done by helping students to care that each student learns the material or engages equally in the project. This is achieved in the Jurassic Park simulation by requiring positive *resource* interdependence.⁴⁰ Group projects are structured so

36. For example: QUALITY MATTERS (2022), <https://www.qualitymatters.org/qa-resources/rubric-standards>; *Quality Online Course Initiative (QOCI) Rubric*, UNIV. ILL. SPRINGFIELD (2022), <https://www.uis.edu/ion/resources/quality-online-course-initiative-qoci-rubric>; *The Rubric*, CAL. STATE UNIV. CHICO (2022), <https://www.csuchico.edu/eoi/rubric.shtml>.

37. Roger T. Johnson & David W. Johnson, *An Overview of Cooperative Learning* (1994), <https://otl.du.edu/wp-content/uploads/2013/11/Overview-of-Cooperative-Learning.pdf>.

38. *Id.*

39. *Id.*

40. *Id.*

that students divide responsibilities equally by making their piece of the puzzle uniformly divisible by the number of students in the group. This means the assignment given to the group must be capable of subdivision in equal parts among members of the group. Educational experts refer to this general setup as a “jigsaw,” with each student having a piece of the puzzle.

Similar to positive resource interdependence is positive *role* interdependence. There, all students are assigned a role that they must play to contribute to the group project. Each role represents a critical piece of the puzzle. Another way to promote positive interdependence is through positive *reward* interdependence.⁴¹ An additional reward or bonus is earned if all members of the group can show they learned the material.⁴² One way to achieve this efficiently in a law school classroom setting is to randomly call on a member of the group to explain the material. If a randomly selected student from the group explains well, the entire group receives a bonus.

Individual accountability/personal responsibility is also critical for avoiding the free-riding problem, yet most professors requiring students to work in groups completely neglect it. In the Jurassic Park simulation, students typically receive 25% credit for the group product and 25% credit for their individual contribution to the group project. The individual grade component ensures that all students are invested in the project and that they contribute equally. For the individual grade, students must submit a report that explains what they personally contributed to the group project and why their group made the choices they did. In the Jurassic Park class, students must also track their time (bill their hours) spent on a project and submit a report with sufficient detail to allow me (the client) to understand how they spent their time. The students’ individual grade portion of the simulation is based on these individual reports.⁴³ For purposes of grading the individual contributions, it is important to design the project so that it is divisible into parts that can be assigned to each individual. In addition, there should be no more than four students per group. No three law students working in a group are going to let a fourth get away with doing nothing. But this ethic starts to deteriorate in teams of five or more.⁴⁴

The other elements suggested by Johnson and Johnson are important, but effective group work can happen without them. With respect to face-to-face promotive interaction, interpersonal and small-group skills, and group processing, one need not attempt any particular instruction in interpersonal and

41. *Id.*

42. *Id.*

43. Having students keep track of “billable” hours, time spent on task, and then having them submit those hours allows students to learn at least a little about this important professional skill. If the descriptions are too general, one can follow up to get a more detailed account, much as an in-house attorney might do in looking over client bills.

44. Johnson & Johnson, *supra* note 37. Plus, this had been my own experience with law student teams prior to implementing the Johnson & Johnson framework.

small-group skills.⁴⁵ The individual grade given to students based on their reports is a serviceable proxy for interpersonal and group skills, because these reports give me a strong sense of the student's group citizenship and effectiveness in working with others but avoid requiring students to evaluate and grade others.⁴⁶

Promotive interaction is "individuals encouraging and facilitating each other's efforts to achieve, complete tasks, and produce in order to achieve the group's goals."⁴⁷ This need not be face-to-face to be effective. In a number of simulation classes I have taught, this encouragement and facilitation has occurred through e-mail exchanges or participation on a discussion board. However, Zoom and similar technologies now allow "face-to-face" promotive interaction online. I was impressed that, in the spring 2020 Jurassic Park administrative law simulation class, students met often on Zoom and were able to work efficiently and supportively.

According to Johnson and Johnson, group processing is "reflecting on a group session to: 1) describe what member actions were helpful or unhelpful, and 2) make decisions about what actions to continue or change."⁴⁸ Johnson and Johnson advocate group processing throughout the semester and suggest allowing it to occur both in the small group and the whole class. In the Jurassic Park class, group processing is handled a bit differently. Law students are graduate students, who typically have already developed a "critical" mindset. These groups regularly process and self-correct on their own. The use of group processing, as Johnson and Johnson describe, is aimed at "ensur[ing] that students think on the metacognitive as well as the cognitive level . . ."⁴⁹ Group processing can always be triggered by asking students how the class might work better. Also, law students, without much prompting, can be directly involved in co-creating their educational experience. In the Jurassic Park administrative law class, students are assigned to teams that correspond with the various parts of any regulatory legislation, investigation, rulemaking, adjudication, etc. However, the entire class is tasked with addressing all the issues that might arise

45. Law students on the whole demonstrate the proper attitude and skills for working in small groups. There are times when one or two students in a class of twenty to thirty decides not to interact properly with the group. I usually find out about it and ask those affected if they wish to report anything to me. If they do, I undergo an investigation and find out what everyone involved has to say about the situation. The individual grade of the student causing problems may be affected. Sometimes team members affected by an individual's behavior choose not to press a complaint. When that happens, I leave things where they are. Those students have made a choice. Many lawyers working collaboratively with others, especially in a law firm setting, make similar choices to "swallow a whistle" all the time.
46. Allowing students to grade one another creates incentives for students to either inflate grades and hope others will do the same for them or, conversely, to give poor grades so they will be viewed better than the others and come out on top of the grading. Law schools create a very competitive atmosphere (if only by ranking students individually) and requiring students to evaluate other students does not work very well in the law school context.
47. See Johnson & Johnson, *supra* note 37.
48. *Id.*
49. *Id.*

if dinosaur parks were authorized to be licensed. If students identify additional issues beyond those assigned to their team, they may voluntarily collaborate to address the issue by drafting a separate part of the statute.

For example, in the spring 2020 class, students on their own decided there should be a statutory provision on “animal welfare” based on the idea that dinosaurs are living beings and should have certain rights to ethical and humane treatment, especially if private profit-incentivized companies will be licensed to run the parks where dinosaurs are held in captivity.⁵⁰ The student proposing an “animal welfare” section solicited the help of another student from the “administrative details” team to co-draft the provision. Similarly, since the *Jurassic Park* scenario unfolded on a small island off the coast of Costa Rica, another student was tasked with writing provisions to ensure the statute would apply as comprehensively extraterritorially as possible. To meet that goal, the student took the position that the release of dinosaur DNA into the biosphere, no matter how well controlled, was a matter of global concern. This thinking led to considering whether there should be a treaty or an amendment to an existing treaty regarding the subject. That student also received substantial assistance from a student in another group who had a strong international law background.

Group processing is also accomplished in other, more formal ways. First, a poll is conducted halfway through the class asking generally about positives and negatives regarding the simulation and also asking how it can be improved. The comments invariably lead to salient recommendations and improvements, and, also, further explanation about the simulation if the poll reveals some part of it has been misperceived. Second, the individual report students submit at the end of the class is required to include a critique of the simulation. That critique often includes reflection on the team and how it worked, as well as recommendations for improving the simulation.

50. Times are always changing. Animal rights law is now offered as a course at the University of Denver, as at an increasing number of other schools. I should have anticipated these concerns but did not. However, the loose structure of the class allows for student creativity and agency. As one student from the class commented to me in writing after reading a draft of this article:

I think that how this happened is completely reflective of the anticipated goal of having a loosely structured simulation. I would think it is exactly what a hoped-for outcome would be . . . I think it also perhaps worth mentioning that this allowed class members to use their own particular background “expertise” and experiences to make the learning experience richer. We benefitted from class members’ passion in certain areas. I might argue that the loose structure created a rich experience that would otherwise not emerge from a typical didactic course where professor pulls what professor wants from student by Socratic inquiry. We would not have had the chance to explore certain aspects of the law without the loose structure—rather we would have been constrained by the professor’s construct of the course. I see this kind of richness as an emergent property of a course-based simulation—it’s unpredictable and not anticipated based on what you start with, but when it appears, it can be encouraged and shaped to reach educational goals that would otherwise remain unrealized.

II. Teaching a Law School Simulation Course Using Canvas, Zoom, Microsoft One Drive, and Google Docs

A. The Overall Setup

The Professional Part-Time J.D. Program at the University of Denver Sturm College of Law (DU) is composed of hybrid courses. Students attend classes every other weekend (eight sessions). Each course is two-thirds face-to-face and one-third online. In the traditional law school model, the challenge in these simulation classes was finding time *during class* to allow students to work in groups. The class begins as a regular class, with students reading cases and the professor engaging them in Socratic inquiry. But as the class and the simulation unfold, more and more class time is dedicated to group work. In the traditional model, the split just happens to be about two-thirds class and one-third group work. The benefit of a hybrid class for this type of work is obvious: One can teach the face-to-face classes as regular classes (two-thirds) and move all of the group work online (one-third).

The group work in the class proceeds in waves. As described in more detail below, the policy team decides the structure of the statute (it does its work early and first). Each other team teaches a different chapter, leading the class in case discussions, and then moving to draft its part of the law after it has gained expertise on the topic. So, after the policy team teaches, the others follow: the information team next, then the rulemaking team, then the adjudication team, and, finally, the judicial review team. The fact development team, regulatory details team, and the enforcement/penalties team do their work consistently throughout the entire semester. Halfway through, the coordination team picks up the statute and works with all the teams on a comprehensive final draft.

The technology for the class had to be figured out in advance. I benefited greatly by working with an experienced online teaching consultant and an in-house online technology expert. They suggested both a course structure and technology to enable students to work the simulation problem effectively.

For the hybrid class, office hours and other student meetings are conducted via Zoom. When COVID-19 required a lockdown, it was easy to pivot and teach the face-to-face part of the class using Zoom. The Canvas course system provided information management for the class. Through Canvas, discussion boards were set up for each of the nine teams. Any intrateam or team-to-class interactions were handled by discussion board. For teams to be able to play around with concepts, ideas, or even statutory language taken from other laws, Microsoft One Drive was used to create a “sandbox” for each team to communicate between themselves. The One Drive pages worked, but they were not ideal, as discussions could not be threaded. Teams were told early on that they might want to set up their own group discussions using e-mail or even Facebook, for example. Some did that, but most soldiered on using One Drive. One Drive did work well for the coordination team, allowing team members to work simultaneously to make changes to the overall statute that they were

tasked in the end to pull together. In the past, and during this class also, some teams felt it was easier to use Google Docs.

B. Before the First Class

With only eight face-to-face sessions in an entire semester of the hybrid program, the class had to hit the ground running. The class began with a set of videos and documents for students to review before the first class. (In the traditional model, the simulation can be explained over the course of the first two classes, since classes meet more often and more continuously than in the hybrid program.) The nuts and bolts of the simulation, as well as student team preference selection, were explained in a series of videos that students could view before the class started. This had two benefits: 1) it inculcated students in the methodology of the simulation, explaining why simulations are valuable and outlining the grading rubric for the class before class even started, and 2) it was scalable: I can use these videos about the simulation and the methodology for simulation classes over and over again.

Before the first class, students were assigned to watch the following videos:

1. *The Use of Simulations in Legal Education* (fifteen minutes): If you're doing something different from everyone else, you have to sell it. This video discusses the studies and sources I have cited in this article to justify a simulation approach.
2. *Jurassic Park Simulation and Structure* (eleven minutes): Explaining that students must write a law dealing with the problems in the *Jurassic Park* novel, banning use of dinosaur DNA, allowing for dinosaur parks to be licensed and regulating the activity, or creating a government-sponsored dinosaur park. The video indicates they must use administrative and constitutional law principles in drafting the statute.
3. *Jurassic Park Simulation Teams* (fifteen minutes): Describing the nine teams that will work on the statute. Most of the teams follow the chapters of the administrative law casebook, covering all the major areas of administrative law. There's a policy team, an information team, a rulemaking team, an adjudication team, and a judicial review team. In addition, a fact development team (responsible for knowing the facts of the novel), an enforcement/penalties team (new this year), a regulatory landscape/details team (to look at the current state of genetic regulation and cover any area not covered by another team that the class/they deem worthy of adding to the statute; this year's team covered extraterritorial application, federal and state genetic regulation efforts, insurance, and animal welfare), and a coordination team (two students who pull the statute together at the end). After watching the video, students submit a form to me indicating their top three choices.
4. *How Grading Will Work* (ten minutes): The video explains how grades will be awarded in the class and a final grade determined. For this class, the video explains that fifty percent of the final grade will be based on traditional

class measures: 1) class participation on the assigned cases and readings from the casebook (twenty-five percent), and 2) late midterm or final examination (twenty-five percent). The other fifty percent will be based on participation in the simulation: 1) the product (draft of the statute) produced by the group (twenty-five percent), and 2) an individual grade based on each student's contribution to the group grade (to evaluate this part, students keep track of their time on task as if they would be "billing" a client for their time) (twenty-five percent).

5. *How Should You Regulate?* (eight minutes): The first issue determined by the class is how they want to regulate the area of dinosaur genetics. There is a very good short reading from an administrative law study book, *Understanding Administrative Law* by William Fox, that sets out the different types of regulatory frameworks.⁵¹ This video walks through the reading and the choices so that the class can begin the discussion immediately during the first class.
6. *Overview of Administrative Law* (eight minutes): This is a relatively quick overview of the subject to better inform student choices about teams, but also to add context for the class generally.

C. Conducting the Hybrid Class

All teams are given a chance to present the results of their work to the class. In addition, several teams become subject matter experts for a portion of the class. For example, the rulemaking team decides what type or types of rulemaking will be available under the statute. It can choose one kind of rulemaking to govern the making of rules under the law or it can choose different kinds of rulemaking for different types of activity. To help its members achieve expertise, the rulemaking team is tasked with teaching the cases and material in the relevant chapter. To be clear, the professor is not ceding this portion of the class to the students. It's more of a flipped dialogue between teacher and student, with the student at the head of the classroom and the professor, along with others, asking questions. This is an attempt to create a Palmerian "community of truth" in the class. As you'll see below in student evaluations, however, many students, if not most, failed to perceive it as a flipped dialogue and instead perceived it as students teaching the class.

In the first administrative law hybrid face-to-face class, team assignments are distributed. The class then discusses the cases on legislative delegation. Students learn the guiding criteria for constitutional creation of, and delegation to, administrative agencies. They also learn a bit about separation of powers, particularly which branches of government do what, and how to spot an attempt by a legislature to steal power from other branches—or, conversely, to cede power to another branch. After discussing these cases and the doctrine generally, the class decides how it would like to approach regulating the Jurassic Park issues. This discussion allows a fairly sophisticated application dialogue, as the students try to take what they've just learned and think about it contextually,

51. WILLIAM F. FOX, UNDERSTANDING ADMINISTRATIVE LAW 5-10 (2012).

all the while weighing the costs and benefits of varying regulatory approaches/frameworks.⁵² The class decided to opt for a government-sponsored dinosaur park. In other words, as with early space flight, only the government could be engaged in the activity while all other (nongovernmental) activity would be prohibited. A hybrid approach (government-sponsored at first, followed by government licensing of private dinosaur parks) lost by only a single vote. After some thought, I intervened and said I didn't think there was enough work in the government-only approach for the thirty-one students in the class.⁵³ Thus, the class proceeded on the hybrid model.

After the first class, the policy team gets right to work. Members of this team are tasked with becoming the experts on delegation and separation of powers. They create the legislative structure/framework for regulation. The professor works closely with the team to select the right regulatory model(s). Usually everyone realizes that the Atomic Energy Act may be the best shell to use for dinosaur park regulation.⁵⁴ The policy team works on the structure and makes a presentation about it at the beginning of the second class (which is two weeks after the first class).

Teamwork is spaced, with teams working in order: policy first, moving on through judicial review and the other teams, and ending with coordination. This is explained to students in the preclass team video so that they can make team selection accordingly. This has worked out pretty well over the years, as students are able to consider law review, moot court, or even work obligations in deciding which team best accommodates their work schedule. As the policy team is working on the statutory framework, the professor works with the information team, helping them prepare to direct the second class.⁵⁵ They will cover administrative warrants, inspections (including warrantless inspections),

52. In the hybrid program, the first class is three hours in length. As a result, I was able to cover both legislative and judicial delegation in addition to facilitating a fairly robust discussion about how to regulate.
53. In a prior class, the government-only approach was followed. This approach necessarily requires analyzing and using the NASA statute as a model. The NASA law is not as robust as laws creating comprehensive regulatory frameworks for regulation. It was fine for a small class of twenty-one students, but not enough for a class one-third larger.
54. Nuclear energy licensing, given its hazards, being very akin to dinosaur park licensing. Any number of other frameworks can work just as well: the Federal Trade Commission Act, the Occupational Safety and Health Act, the Clean Air Act or Resource Conservation and Recovery Act, for example. General requirements: a commission or board, rulemaking and adjudication provisions, an inspection scheme and prohibited activity. Even a hybrid of a NASA shell would work, importing rulemaking and adjudication provisions from other laws.
55. In a traditional class, students don't begin teaching until about three weeks in, after completing the chapter on delegation. In the hybrid class, student teaching begins in the second class, of necessity, since there are only eight classes. Remember, though, the professor is still teaching the class. The student is reciting the case, and the professor is asking questions. The *only* difference is the student is standing at the podium, and the professor is with the other students in the seats. Students, though, sometimes perceive this as students teaching the class. This demonstrates the power of the physical landscape of the class in reinforcing the Palmerian "objectivist myth of knowing." PALMER, *supra* note 27, at 102-04.

subpoenas, and the Freedom of Information Act. These categories suggest a natural division among the members of the team. Each student then becomes the class specialist on their subject. That student will then be in charge of drafting the part of the dinosaur park statute within their expertise. After the information team teaches the class, it begins drafting its part of the statute. The process is repeated for the teams that develop expertise related to specific chapters in the casebook (rulemaking, adjudication, judicial review). The professor meets with all the individual teams before they direct the class, in part to understand how they've divided up drafting responsibilities within their groups. Other teams (fact development, enforcement/penalties, regulatory landscape/details) usually begin their work by about the third class. Professorial time outside class is used to help teams prepare to direct the class or to react to drafts of statutory language if students ask for advice. The professor can access the One Drive intrateam discussions to review developing language. If teams are way off or have not considered something important, the professor weighs in individually or on the group discussion board.

Since students in the class will be engaged in legislative/statutory research, the relevant library staff is invited to teach about doing this kind of research and the resources available. The library staff, including library professors with expertise in federal and state legislative research, give a forty-five-minute presentation to the class and provide contact information in case students have questions as they do research. The lecture encompasses legislative and statutory drafting resources, federal and state legislative research, federal legislative history research, and administrative law research.

D. COVID Lockdown: Moving Completely Online with Zoom

In March 2020, the class was moved completely online because of COVID-19. The last three face-to-face three-hour classes in the hybrid program were taught online. In all those classes, students were either directing the class through the subject matter (adjudication and judicial review) or leading the class in finalizing the statute (coordination). The students in the Professional Part-Time J.D. Program transitioned to completely online classes fairly easily. This should not have come as any surprise, since they had been taking hybrid courses for a year and a half and were comfortable with Canvas and Zoom.

All the student teachers used PowerPoint to direct/teach their portions of the class. The "share screen" function in Zoom accommodates PowerPoint presentations very well. The students seemed no less at ease teaching online than teaching face-to-face/in person. In many ways, making PowerPoint presentations on Zoom is better. There is no cumbersome process to connect a laptop to a projector or Smart Podium as in a classroom and the slides are easily viewable on each laptop. In the traditional classroom, some students strain to see the screen and the image might be hazy. It's very clear on a laptop in a Zoom class. The only drawback is from a professor's point of view. Once the "share screen" function is triggered to show a PowerPoint, the professor can see only a few of the students in the class at a time unless using a second monitor.

E. Grading/Student Work Product

1. Individual Reports

The individual report must: 1) explain what work the student did for the group project (what they drafted plus any research involved), 2) explain why their group made the regulatory choices it did, 3) provide a debrief of positives and negatives regarding the simulation experience, and 4) include a report of “billable” hours for work on the project. The students’ explanations about regulatory choices and insights about the simulation, often naturally involving their experience with their team, tell a great deal about the individual students’ understanding of both the project and administrative law. The professor can make changes to the simulation for future classes based on this feedback. The individual report adds to the assessment of the final individual grade for each student.⁵⁶

Individual reports usually range from three to five pages, but I impose no minimums or maximums. Students should write what they need to fully answer the questions posed. For this class, individual reports ranged from two to ten pages in length. The class average report length was five pages. Likewise, students want to know how many hours they should spend on the simulation. Again, to replicate the real-world experience of lawyering, it depends on the work they need to accomplish to complete the draft statute by the last day of class. Students ideally should spend for the class in total about the same amount of time they would spend on a three-credit-hour class. In the past, the average number of hours spent purely on the simulation has ranged from twenty to twenty-five hours. For this class, the number of hours spent on the simulation ranged from twelve and a half to seventy-five hours, with the class average at thirty hours. The top students in the class averaged about fifty hours on the simulation. The individual grade (based on student reports, billing logs, and my own notes about their performance) counted as twenty-five percent of the grade for the class.

2. Group Project: *The Federal Dinosaur and Extinct Species Act* (FDESA)

The coordination team takes control of the statute draft about halfway through the semester. Its job is to make sure the statute makes sense holistically, that sections are properly organized, and that different parts relating to the same subject are consistent and properly connect to each other. Done correctly, the job is substantial and can be trying. The coordination team communicates with all the other teams and makes sure they are doing their part in a timely manner. The team also sometimes assigns work needed to complete the statute. The professor should work closely with the team in support, weigh in with them about where the statute is vague or has holes, and make suggestions about what

56. The individual reports mostly serve to confirm the data I have already gathered through observation about student performance. There are, however, occasional surprises. In this class, I was surprised to find that the individual report of one student showed a substantial amount of work behind the scenes.

else is needed and which group should be responsible. From time to time, the professor may have to intervene when another team might be questioning the authority of the coordination team or just to lend the professor's voice to theirs. At the end of the semester, the coordination team delivers to the professor the final version of the statute. This semester's *Federal Dinosaur and Extinct Species Act* was forty-five pages long. The coordination team typically spends the last classes (or, in the PTJD format, the last three-hour class) going over the statute with the class. This process actually worked better online with Zoom's screen-share function than in class projected onto a screen.

3. Traditional Grading: Class Participation and Final Examination

As mentioned already a few times in this essay, fifty percent of the grade in these simulation classes is for work on the group project, while traditional measures (class participation and an exam) are used to grade the other fifty percent.⁵⁷ In this administrative law simulation, the fifty percent grade for simulation work was split evenly between a grade for the group product (twenty-five percent) and an individual grade for individual work done on the simulation (twenty-five percent). The other fifty percent would be split in half also, with twenty-five percent for class participation (this means nonsimulation class participation—asking questions or reciting administrative law cases assigned for class in the syllabus). The simulation grading is in four parts for a number of reasons. The individual grade, as already explained, ensures that all group members do their part in the simulation and discourages free-riders, as explained by Johnson and Johnson's cooperative learning approach.⁵⁸

The final exam in the class (sometimes a late midterm) is critical. The exam requirement motivates students to pay attention to all the work in the class, involving both the simulation and regular class doctrinal learning. The reason is that the final exam typically consists of two essay questions, one about administrative law in general and the other about the statute written by the class. The statutory question can be answered by reviewing the statute, and it is usually pretty straightforward ("You represent a company seeking to build a dinosaur park. What can you tell the company about the process for getting a permit from the government? Please also discuss any pitfalls or challenges it should be aware of."). The administrative law question is a typical long essay question asking about rulemaking or adjudication or administrative searches, etc. I have found that students tend to study pretty intensively for any type of final exam, even if worth only twenty-five percent of the grade. Study intensity

57. *See supra* Section II.A. Students become highly efficient by the end of their first year in being able to brief cases, synthesize them, and prepare a study outline. This means that by the second year, students have more time to spend on class work. Granted, some students will leverage their study efficiency to participate in moot court competitions and/or work on law review, and some will clerk. In these simulation classes, the extra time they gain through study efficiency can be used to work on the simulation. For this reason, it's not clear that these types of simulations should be used in first-year doctrinal courses.

58. *See supra* notes 43–45 and accompanying text.

is especially high if students think that many students have done well on other graded components and the final exam will break the tie, as it were.

Unfortunately, two years ago (spring 2020), COVID-19 shutdowns started in mid-March, forcing the last three three-hour Professional Part-Time J.D. Program classes to go online. Given the nature of the program, which is already one-third online, the class pivoted relatively easily. However, there was quite a bit of domestic upheaval, with many students forced to suddenly care for children at home or manage unexpected changes in work schedules and workload.⁵⁹ Also, technology disparities among students became more obvious. The Sturm College of Law faculty voted to adopt a pass-fail grading system for the semester. I polled my students about whether I should give a final. Perhaps unsurprisingly, only one or two students wanted the final exam. In the end, I could not in good conscience force my students to take a final when I already had the data to determine seventy-five percent of their grade for the class. I realized this meant that some students would not learn all they could have about administrative law, but I believe the class's completion of the simulation statute met most of the goals for the class related to long-term retention and transfer.

F. Reflecting on the Experience

1. The Students' Perspective

Just over ninety percent of the class completed an end-of-semester anonymous evaluation of the course. All comments related in any way to the simulation are reprinted here because I did not want to filter any student commentary to avoid bias on my part. I divided comments only into negative and positive ones. Many students wrote both positive and negative comments. Also, I excluded any comments that were solely about the professor.

a. Positives:

- Professor put a great deal of thought into carving out the most crucial cases from our book and prioritizing those so we could put our statute together in the simulation. He directed us to the right places and people for research.
- Fantastic class! I thought the simulation was well thought out, and forced me to learn in a new way which I appreciated. Also, I liked being able to engage with my fellow classmates outside of class.
- The main challenge of the course is the simulation format, which requires independent research and work without the usual structure and heavy loads of cases. I personally liked the simulation format because it forced me to assess what my own standards of work are in relation to a group project. The increased flexibility also helped me find balance with other class workloads,

59. The majority of students in the Professional Part-Time J.D. Program, if not all, work full-time jobs, many with responsibilities that can expand rapidly and demand more than forty hours a week, without additional compensation.

even though the workload was on par with a 3-credit course, because the simulation work has only a few self-imposed deadlines.

- It is nice to see a pedagogically sound approach to legal education. The simulation is a great idea. I think it needs some logistical tweaks to make it work well in the weekend format, but that shouldn't be a barrier to doing it.
- The course model was interesting, and I liked the fact that the course tried to cover less substantive material, but cover it more in-depth, so it actually sticks in my mind long-term.
- I really appreciate the opportunity to take a weekend course that allowed for experiential learning. Like many things with the weekend program, being the first out of the gate is difficult. I appreciate Professor's attempt to make the students in this class self-reliant and challenge us to apply the material as we were learning them.
- The simulation is perhaps one of the coolest learning experiences I have had to date; it is extremely thought provoking, builds on the lawyerly skill of research, synthesis, drafting, and communication, and bolsters core competencies typically gleaned from outside the classroom (collaboration, time management, accountability, compromise, empathy, etc...). In my experience, the modus operandi of law-school, the singular final exam, is not an effective means of preparing us for the real problems of practice when we need competencies that go beyond the ability to recall information and type fast. The problems encountered in Jurassic Park are akin to the problems we will be solving in practice and the simulation allows students to actually learn about themselves, their strengths and weaknesses, that are going to be more important to their professional progress than getting a sprint-to the finish Torts final. In terms of adapting to the PT program format, Professor did an excellent job in utilizing a mixture of technology, Canvas, casebooks, his own presentation materials, short assignments, and lectures. The use of introduction, explanatory, and follow-up videos bolstered the learning experience tremendously, and I found the use of team specific collaborative tools to be extremely helpful. The presentation from the library/research department and posted guides were also incredibly helpful and are something I will reference continually throughout my legal education! Other classes, regardless of form, should follow Professor's lead in diversifying the platform of learning. I also enjoyed being one of the teams to lead the class discussion and present—it provided a different perspective on lectures to say the least and I was fortunate in that my team worked together fantastically.
- The simulation was transitioned easily to the online format. I had to give a class presentation at the first online meeting because it had been scheduled in the syllabus, and the process went smoothly and felt similar to presenting in the classroom. Professor did a great job assisting with any questions we had about the simulation format, and I felt that the online

format was a painless transition even with the different course format that we were working with.

- The simulation approach [Professor] took with our class was not for everyone, but I found it to be the most exciting and thought-provoking class of law school so far. If one is willing to show a little humility, not expect immediate perfection in themselves, and bring a growth mindset to a classroom, they will flourish in this class.
- The simulation course is innovative, and it breaks the monotony of the read, lecture, and test style of the doctrinal courses.
- [Professor] managed to give us flexibility and independence while still challenging us to learn new material. I think the simulation is a great tool because it forces students to think differently in the classroom setting. I do think, however, that it is a classic “you get out of it what you put into it” type learning environment, and it may not work for all students, or for every class in law school. But it is a very useful exercise to do at least once in law school, in my opinion, because it does force you to think differently and re-consider how you approach work/study.
- The simulation process is an innovative way to teach administrative law. Utilizing Jurassic Park was a fun way to think about how one goes about creating laws, issues that need to be considered, and the implications of words, content, and potential results.
- The success of the simulation depends on the level of buy-in from students; any negativity that may stem from this class is not a reflection of Professor but of the students and their individual struggles. Professor provides all the tools to succeed, and the onus is on students to figure out how to work together, ask for help, and be self-reliant.
- In the positive: Professor was extremely responsive to emails and his attention on the class was evident. Further, the creativity applied, and the fun attempt of a cool simulation is also something to be applauded. He created an atmosphere that made it approachable to ask questions and his honesty and openness to the subject material and how Administrative Law works was helpful and refreshing.
- The simulation model made the challenging coursework much more engaging.
- The admin statute simulation is an excellent tool and should be offered consistently.

b. Negatives:

Simulation Workload Distribution

- I'd like to see equal time between cases and substantive analysis of Admin Law, but the JP simulation makes that almost impossible in 3 hours. The simulation takes up nearly all my time for this class outside of our readings, so it's been difficult to balance the abstract Admin Law with the simulation, given that our small groups are hyper-focused on certain subsections of the law.
- I think the simulation was good but it did feel the work load was distributed differently.
- I appreciated the simulation approach to administrative law. [I] felt like our section had less work to do and contributed less to the statute. I don't know if there's a way to engage later teams earlier on or if some sections are just more administrative in nature (adjudication, judicial review) and naturally are less controversial.
- I think [the simulation] could use some tweaking, especially for the part-time format. Most notably, the workload among the teams seems to be very unbalanced with the Policy and Coordination teams taking a very heavy load while others not taking nearly as much. Having teams who don't have a high workload write memos only creates more reading for those that may already be overwhelmed. As someone not on those teams I was worried as to how I could possibly get a good grade based on a curved grading system where I am compared to other students.
- Four people on the fact development team is too many; at the outset of the class, there is likely enough for one to two people, but not four. Also, the fact team's participation in the creation of the statute is extremely limited which does not allow for active participation or engagement in the greater project. For the other groups, it seems to have been an excellent exercise in administrative law, so my critique is limited solely to the fact development team.

Structure

- I don't think this course is well-suited for a hybrid weekend course. Just the amount of time spent in short bursts, coupled with the type of people and their work schedules, makes for a painful experience. Additionally, I understand the need to give students freedom to go through the simulation as they see fit, but with a weekend course, where meeting times are rare, I think giving it more structure is important. Providing more concrete deliverable deadlines may just solve the issue for the whole course, since a decent amount of grief came from not knowing what's going on for several weeks.
- The one recommendation I would provide is starting with a basic structure of a statute. A lot of time was spent by the Coordination team to create this structure which led to frustration with multiple teams. This would also

help set the stage for the ultimate goal to be achieved and ensure that the resulting statute isn't excessive for the final exam.

- I ended up enjoying the simulation more than I thought I would, and it drove home the point that administrative agencies are only as good as their organic enabling statutes. However, the group work aspect of the simulation and the group to which I was assigned was very ineffective for me. My small contribution to the statute was cursory at best, and I feel very guilty that so many other students put in so many hours of work. Additionally, I didn't feel like I could have contributed more heavily, so I felt limited in my ability to contribute as much as I wanted to.
- Negative The simulation needs some tweaking—this isn't negative per se but here is where I'm putting it. Here are my thoughts: (1) frame each group's scope early and narrow it some (people didn't really get that the class discussions should frame their writing of statutory language); (2) require a meeting with each group to review their language; (3) nip the over-reaching folks in their proverbial buds before they get off on a crazy jaunt that is totally tangential to what the statute needs; (4) revisit the issues identified by the facts team very early in semester to help people frame what they are actually trying to fix; and (5) require each team to designate a "leader" so that correspondence between teams is via one person.
- The content of the course did feel a little off balance, as the workload for the simulation often overtook the workload for the rest of the class. This may have been by design. I would have liked to have spent more time on the cases and law.
- Further, while there were some "that's the real world" elements, in the professional world it is easier to call on accountability, where in this class we were often faced with throwing group mates under the bus for being slow to relay information or leave other groups hanging while coordination of your group occurred.
- I also recommend removing the "vote" on the style of simulation in circumstances like this, where we ended up getting somewhat shoehorned into a destination due to class size anyway.
- I would have felt more comfortable if we had reviewed the material the first half of the semester then did the simulation the second half. I feel like my piece would have been better informed and I would have not had to go back and do as much editing.
- First, a clear indication of schedules and timelines should be sent out with the initial request for selection of a particular group. At the beginning of the semester it was very unclear to me what my commitment level would be in this simulation exercise, when it would occur, and how this would impact my team members and me. Having more foresight into this we could have worked better as a team and potentially had individuals commit

equal amounts of time without causing some initial frustration. Second, I am a bit concerned that the simulation exercise makes people specialists in the area of administrative law they were assigned and may not be the best method for an overall comprehension of administrative law. I am not sure there is a better way to teach the course utilizing the simulation but it does concern me about what I learned this semester.

- While there was an effort to make this a sandbox experience, the lack of structure was difficult for numerous reasons. A big issue was in trying to get clarification on the course and many answers would be “whatever you want.” While that freedom was cool, it was a lot of weight that sometimes required decisions that affected the whole class since we were working on this together.

Elective vs. Required Course

- In my opinion, the simulation would be best used as an elective. If you are a student interested in Administrative Law then this would have been a fantastic course. If this isn't your bag, then I think a typical format would have been more instructive. There is a lot of independent learning as part of the simulation, which I generally enjoy, but in a context where the subject matter was unfamiliar, not part of my area of interest, and not having the same level of access to the library and librarians being a weekend student made it difficult for me to learn.
- Overall, the professor for this course was great, but the structure of this course was not the best. I think the simulation should be reserved for programs where students have more freedom to opt in and out of that structure.
- While there are valuable things to simulations, we didn't choose a simulation and having it thrust upon us in a required course was disheartening.
- On the positive end, it was very great to get a sample of working as a lawyer versus being a law student. I think there just needs to be a reevaluation of how to apply such simulations to the part time program and definitely only when students know that's what they are signing up for.

Student Teaching/Flipped Student-Teacher Roles

- The structure of this course was really not for me. Student groups taught large chunks of the course, including administrative searches and rulemaking. That may have been excellent for their learning as those designing the lessons, but without a teaching background, many of them fell short of effective teaching to other students, and I think my knowledge of administrative law suffered.
- I appreciate the method of having students teach the cases, however, I struggled to follow many of them given the different styles, comfort levels with public speaking and, in general, their motivations. Overall, this class exposed me to many different areas of administrative law.

- [T]he fact that many classes were spent being taught by classmates (who were only just learning the material) meant lots of rereading and lots of confusing information being conveyed. It is the first class where I had an extreme amount of trouble taking notes since so much would have to be deleted and rearranged. In the future, I would have groups give presentations with the professor, not to the professor, since the stress for everyone is through the roof in this scenario and we as students are paying for the information and it would be best served if the professor has screened what is being presented more thoroughly before class time.
- I enjoyed the simulation portion of this course however I did not enjoy having the content taught by students. I learn more from lecture than anything else and while the students tried hard it is just not their area of expertise, I really felt lost with much of the content. On the flip side I learned so much from being able to apply the knowledge by writing the statute and felt very supported throughout that process. If I were to suggest a change it would be to keep everything the same except have in class lectures for the readings similar to a traditional course even if that was just recorded versions via zoom.
- The only negative comment I will make is that the admin/registrar should have communicated that the class was a simulation on the registration course schedule. Hearing that it's simulation course for the first time when you login into Canvas the week before in person classes start is not cool.
- Cold calling is always a useful way to ensure we're reading, but at times, too much emphasis was put on the minute facts whereas more time could've been spent applying the rule and how it shows up in current cases. Plus, some peers didn't quite get the case and its holding correct; more intervention or gentle correction would've helped us take away what was necessary from the case and the peer's presentation.
- [I]t felt like he didn't teach most of this course. He allowed students to teach large sections of the content, and while that may have been great for them, it left gaping holes in my understanding of the content.
- There was also a very limited amount of lecture time in this course, and again, while the changes were nice, I feel it went too far to an extreme. Not only were students expected to instruct on sections of the class, they had to do so while also attempting to use skill of a professor. Time management, classroom management, cold calling, all presented struggles at one time or more than one time, and students shouldn't be expected to do all that on top of topic mastery. As such, the lack of lecture time was palpable and something I would prefer to have more of in the future.
- I'm sure the professor is great, however, the students taught the course. Tuition at DU is far too high to receive an education from a cohort of other law students. The tenure, expertise, and experience of the professor is what I'm paying (full price) for. In trying to assess what I know about

admin law now that the semester is over, I'm facing difficulties. I know a ton about the facts of Jurassic Park, the novel, though.

- My only gripe would be the tangential nature of some student-led class sessions; I understand that this course is geared towards self-exploration and research and no professor wants to discourage a student's curiosity, but often times the same handful of students would lead the entirety of the class down a rabbit hole for their own self-interest.

Scheduling Group Meetings

- The format of the course was interesting and engaging on paper, but it was a very poor fit for this type of program. Working out schedules with a class of working professionals made group coordination difficult.

2. The Professor's Perspective

Given that the simulation was taught as a mandatory course (administrative law is a required course at the University of Denver), imposed on the students, and in a hybrid program that met face-to-face only once every two weeks, and then only online for the last few classes, I thought the class worked well. An evening simulation class in labor law taught several years ago met with some strong objections from students who felt that it was too difficult to balance classes, a simulation, and a full-time job. Given the Professional Part-Time J.D. Program's structure, with face-to-face meetings held just once every two weeks, this class did not meet quite the same resistance, though some students did feel the course did not work well with their busy work schedules.⁶⁰

On the positive side, students worked in teams over the course of the semester, managed a fairly unstructured simulation on top of the regular caselaw assignments, were able to adjust their schedules as necessary to engage in effective group work, and delivered a complete and comprehensive statutory draft. Technology supported the group work beautifully. Zoom was used efficiently for group meetings undertaken as part of the one-third of the class that was online, not face-to-face. There was a high level of student interactivity within and outside of teams, including a good amount of peer teaching. Students for the most part understood and appreciated what was happening pedagogically, and most described it as a robust learning experience.⁶¹ In the end, the bulk of the criticism in the evaluations was constructive, with students offering suggestions and ideas about how the simulation might be improved.

60. A colleague who saw an early draft of this essay commented, "I have to say, I am surprised by the evaluations. I would have thought more people would have embraced it. I find it fascinating that in this day and age so many are accustomed to and prefer the structured, traditional approach to most things and [are] not as receptive to creative or new." I replied, "I'm actually thrilled with the evaluations. I think they are mostly quite positive. Most of the complaints are about things I can fix."
61. Only one student dropped the class. It was apparent the student was not happy with the team assignment.

On the negative side, some students did not like having the simulation forced on them in a mandatory/required course.⁶² Students also complained about the lack of structure. Students wanted me to establish deadlines for the work. The students were free to impose any deadlines they wanted on themselves. Some students did, and self-imposed structure worked well. The lack of structure is purposeful. In trying to implement Palmer's "community of truth," I try to stay away from edicts imposed by the professor as much as possible. Some are necessary. For example, if the policy team does not begin a concerted effort pretty quickly, the entire simulation suffers. I don't impose deadlines, though.⁶³ I work with the teams and often explain the overall flow of the work in the simulation. Who am I to impose deadlines? The students are the ones who understand the work required, their capacity to do it, and their own work schedules outside of law school. I did feel as if the students in the Professional Part-Time J.D. Program, perhaps necessarily, had more structure imposed on them than students in the more traditional day division program.

Student teaching was perceived as the students teaching the course, despite my explanations about the discussions being the same, only flipped. I do think the move to online fueled this perception. In past simulations, when students have been responsible for leading case discussions and I've been in the back of the classroom asking questions as if I were a student, the students seemed to understand I was a more experienced "knower" and that, as the professor, I was still very involved in the teaching of the subject matter, or at least more visibly guiding the discussion. In the classroom, I filled up more space with my presence even though seated as a student. This extra "presence," if you will, disappeared when I was cabined in a Zoom box online. This led to a perception that the students were teaching the class without my guidance. In any case, I'll need to restructure the student teaching part of the simulation or communicate about it in a better way. Some students felt the simulation took away from learning substantive administrative law. This might have been a reaction to my canceling the final exam because of COVID. With the final, students

62. In the past, my simulation classes have always been electives. In the day division, although administrative law is a required course, there was always a traditional alternative to the Jurassic Park class. And although any student not liking the format could have dropped the class with no penalty, the only option in the PTJD program would be to wait until the following spring.

63. One student in the class who read a draft of this article commented:

"My sense, for what it is worth, is that students were uncomfortable imposing deadlines on other students. I know that when [my teammate on the coordination team] and I said "Can you get this to us by xxx and folks said "no"" we just let it go as the solution was to bring it to you and then we'd look whiney to our classmates. Perhaps this might be overcome by having the groups establish the deadlines as part of an early assignment and let the groups negotiate together about when things would be due for others to see. That way, it is out of professorial edict, but gets done."

might have felt they'd learned more substantive administrative law, having had to study it more intensely and outline it for themselves for the final exam. In the end, I was impressed with the students in this PTJD cohort. Rather than just registering complaints, virtually all offered up solutions or ideas in their evaluations. That is rare.

Conclusion

Educational technology advances (Zoom, Microsoft Teams/One Drive, and Google Docs) are finally robust and reliable enough to allow meaningful group work in law school. In the past, students had to find time in physical law school spaces to meet for group projects or to engage in a conference call, allowing only audio communication. New technology allows students to work together online from various locations. Group work can now be done effectively from student homes. The robust administrative law simulation I conducted using new technology in spring 2020, with all of its COVID complications, and in a cohort of students with full-time jobs, shows the potential of law school simulations. New hybrid and online classes are especially suited for simulation approaches, since the group work done by students can be accomplished outside the classroom.

Importantly, though, the technology alone does not make group work effective. A sound pedagogical approach, like the cooperative learning structure by Johnson and Johnson that I have used and discussed in this article, is critical for success. Any simulation class must have components of group and individual accountability, and groups should be kept small, to avoid free-riding issues arising in unstructured group activity.

The Jurassic Park administrative law simulation is only one approach to the sort of complex law school simulation that I believe is critical for preparing future lawyers to be as effective as they can be starting day one of practice. Technology now allows law professors to answer the call of the Carnegie Report and develop effective simulation courses for law students.