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Using Distance Learning to Teach Environmental Problem Solving Skills and Theory

INTRODUCTION

In 2009, Vermont Law School began building distance versions of its Master of Laws (LL.M.) program in Environmental Law and Masters of Environmental Law and Policy (MELP). The idea was to

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create online versions of these degrees for students who could not relocate to South Royalton, Vermont. Because the courses for these degrees would offer the same credit and confer equivalent degrees as those offered to residential students, the method of instruction needed to be equally rigorous. Accordingly, course design was critically important to satisfy our accreditors. To avoid the problems commonly associated with distance-learning courses,[1] we designed ours to be taught asynchronously to a maximum of sixteen students. All of the required courses in the LL.M. and MELP degree were offered in the online format and, since our MELP degree has a dispute resolution requirement, I was asked to design and teach Environmental Dispute Resolution (EDR) to satisfy that requirement.

Adapting my EDR course to the distance-learning format presented several challenging questions. First, in addition to significant instruction on the theory of environmental decision making, the course teaches students the basic skills needed to negotiate environmental disputes. In my residency version of the course, I teach these skills through face-to-face simulations. Could students in the distance-learning version learn about the importance of reading body language, facial expressions, and other nonverbal cues? Second, simulations in the face-to-face class are conducted simultaneously. Could the asynchronous platform deliver a similar experience? Third, a few simulations have more than five roles. Would technology (bandwidth and software tools) be able to accommodate so many negotiators? Fortunately, other professors have labored with similar problems and their efforts offered useful guidance in the conversion of my course.[2] Before I answer these questions, I will first explore

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[1] *See* Carolyn Foster Segal, *MOOCs R Us*, INSIDE HIGHER ED (Mar. 7, 2013), http://www.insidehighered.com/views/2013/03/07/thomas-friedman-wrong-about-moocs-essay; Mary Beth Marklein, *College May Never Be the Same*, USA TODAY (Sept. 12, 2012, 10:33 AM), http://usatoday30.usatoday.com/news/nation/story/2012/09/12/college-may-never-be -the-same/57752972/1; John Markoff, *Measuring the Success of Online Education*, N.Y. TIMES (Jan. 17, 2013, 9:07 AM), http://bits.blogs.nytimes.com/2013/01 /17/measuring-the-success-of-online-education/ ("One of the dirty secrets about MOOCs—massive open online courses—is that they are not very effective, at least if you measure effectiveness in terms of completion rates.").

[2] *See generally* Joshua N. Weiss, *A View Through the Bubble: Some Insights from Teaching Negotiation Online,* 21 NEGOTIATION J. 71 (2005); Michael L. Perlin, *Online, Distance Legal Education as an Agent of Social Change*, 24 PAC. MCGEORGE GLOBAL BUS. & DEV. L.J. 95 (2011); David Spencer & Samantha Hardy, *Deal or No Deal: Teaching On-line Negotiation to Law Students*, 8 QUEENSL. U. TECH. L. & JUST. J. 93 (2008); Ellen S. Podgor, *Teaching a Live Synchronous Distance Learning Course: A Student Focused Approach*, 2006 U. ILL. J.L. TECH. & POL'Y 263 (2006); Daniel C.

how the course was developed, the organization of my EDR course, and then how instruction takes place in the asynchronous, distance-learning environment.

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COURSE DEVELOPMENT

Creating the asynchronous version of this course was much different than creating the synchronous classroom course. Both the development and the instruction of the course took place over different time frames. There were different tasks to complete when creating the asynchronous version. In addition, I needed to work with course designers and the curricular dean to make sure the course fit into the degree program. In this asynchronous platform, because the core method of instruction is through feedback on assignments, developing a course required an organized up-front effort. The entire course was built long before the first day of class. This approach is markedly different from a synchronous course, in which the professor can start teaching with an outline of the course and then continue development while the course is being conducted by staying one week ahead of the students. Asynchronous courses require the professor to complete a host of tasks before the course is launched, including working closely with a course design team to build the software infrastructure.

The course-building process took several months to complete. The goal was to create a course that would fit into the degree programs and teach the same theory and skills that are taught in the synchronous face-to-face version. None of the other courses in the degree program taught negotiation skills. The negotiation skills element presented additional instructional challenges that had not been explored in other courses. As explained more thoroughly below, we integrated negotiation simulations into the software and found

Powell, *Five Recommendations to Law Schools Offering Legal Instruction over the Internet*, 11 J. TECH. L. & POL'Y 285 (2006); Lori Abrams, Peter McAteer, David Fairman & Lawrence Susskind, Program on Negotiation, Harvard Law School, Negotiation Pedagogy Faculty Dinner Seminar on Teaching Negotiation Online (Apr. 17, 2012). A summary of the seminar is available at https://www.pon.harvard.edu/research_projects /negotiation-pedagogy-program-on-negotiation/teaching-negotiation-online-spring-nppon-faculty-dinner-explores-online-learning/; Interview with Lindsey LeBouf Massey, student in Brandeis University's online distance-learning program (July 21, 2012).

ways to provide feedback that allowed students to learn from their experience.[3]

Consistent with the requirements for other courses in Vermont Law School's degree programs, EDR is organized around enumerated learning objectives. The course is organized to address these objectives in seven week-long modules. Each module offers material relevant to those objectives and assignments designed to assess students' understanding. The learning objectives are designed to develop the students' knowledge base by building on a level of mastery from earlier modules.[4] For example, objectives in the first module aim for students to "correctly identify" differences and "evaluate relationships" among different concepts. Toward the end of the course, the objectives set a higher bar of performance expecting students to "appropriately advocate," "demonstrate awareness," and "apply lessons." The aim of this progression is to help students accomplish a mastery of the information, from simply being able to recall information to making judgments about the value of concepts and different ideas.[5]

The typical learning materials in a graduate level course include learning from text and possibly video material in the library or online. Similarly, the learning material in this online version of EDR includes a textbook, readings excerpted from books, articles, websites, and links to videos and audio material. The learning material is selected to help students achieve one or more of the learning objectives. Other than the text, students have access to all the materials through the online content management system.

Students must complete two to three assignments per module to demonstrate their mastery of the learning objectives. Assignments include writing papers, participating in a discussion board, or engaging in a simulated negotiation. Rubrics are used to assess students' performance and are linked to the learning objectives for the module.

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[3] Roy Stuckey, *Teaching with Purpose: Defining and Achieving Desired Outcomes in Clinical Law Courses*, 13 CLINICAL L. REV. 807, 814–24 (2007) (outlining the goals of experiential education).

[4] *See* MAX D. ENGELHART ET AL., TAXONOMY OF EDUCATIONAL OBJECTIVES: THE CLASSIFICATION OF EDUCATIONAL GOALS: HANDBOOK 1: COGNITIVE DOMAIN 62-197 (Benjamin S. Bloom ed., 1956) [hereinafter BLOOM'S TAXONOMY].

[5] According to BLOOM'S TAXONOMY, the levels of intellectual skill, starting with the first and going to the last, are: knowledge, comprehension, application, analysis, synthesis, and evaluation. *See id.*

The nature of the student-professor interaction will vary depending on the type of assignment. Writing assignments offer an opportunity for the professor to give feedback on the students' performance and help the professor assess the students' ability to incorporate the learning material into the assigned task. Feedback to students clarifies any confusion, provided the students take the time to read the comments.

Discussion boards provide a more dynamic method of feedback and assessment. Most discussion boards require students to post an answer to a question and then respond to another student's post. More often than not, students respond several times to different posts and get engaged in a few discussions. The professor can participate in these interactions by asking questions, highlighting areas of concern, and clarifying misunderstandings. The professor can draw distinctions among student posts, make references to the text to clarify concepts, elaborate on certain ideas, and make connections across the modules to provide perspective. Discussion boards can also be used to introduce supplemental materials beyond the learning materials. By referencing different sources and providing access through an attachment or a website, the professor can help the students develop a knowledge base.[6] This participation allows the professor to guide students as they move through their task of analyzing, synthesizing, and evaluating the information.[7]

In addition to papers and discussion boards, I assign the students four simulated negotiations. The aim of these simulations is to give them an opportunity to practice consensus-building skills necessary for resolving environmental disputes. Each simulation builds on the students' experience in previous assignments. The first simulation is not presented as a negotiation, but as a group project. By engaging them in a familiar exercise,[8] they can focus on the assigned task without being distracted by their negotiation performance. Once complete, the students learn why this exercise was in fact a

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[6] *See* DEEPAK MALHOTRA & MAX H. BAZERMAN, NEGOTIATION GENIUS (2007); *see generally* Jaime G. Carbonell, *Learning by Analogy: Formulating and Generalizing Plans from Past Experience*, *in* MACHINE LEARNING: AN ARTIFICIAL INTELLIGENCE APPROACH 137 (Ryszard S. Michalski et al. eds., Tioga Publ'g Co. 1983), *available at* http://repository.cmu.edu/cgi/viewcontent.cgi?article=3475&context=compsci.

[7] *See* BLOOM'S TAXONOMY, *supra* note 4, 144–97.

[8] Group projects are common in other courses and since this is an upper level course, the students are familiar with a range of assignments.

negotiation and can dissect their interaction from that perspective. By engaging them in a negotiation camouflaged as a discussion, the students learn that elements of negotiation arise in many contexts. The subsequent negotiations introduce new elements then ask students to reflect on their experience through whole class discussions and individual reflections.

Unlike the residency version of this course, these negotiations are not face-to-face. Instead, negotiations are conducted through some technology-mediated interface, such as discussion boards, chats, phone, or videoconference. Three take place asynchronously on a discussion board and the fourth synchronously in a chat room, on the phone (with a transcript), or on a recorded videoconference. When conducted this way, the professor can observe all of the interactions in a way that is very difficult to replicate in the classroom. In addition, the students learn how to navigate some of the advantages and limitations of the technology-mediated environment.

Consistent with experiential learning theories,[9] these simulations engage students in a cycle of learning the theory behind a skill, practicing that skill, and then reflecting on the experience. Students reflect on their simulation experience by participating in a class discussion and then drafting a personal reflection on their performance after reviewing the professor's debrief. This process of reflection encourages students to engage in an analogical investigation of the experience.[10] The reflections also allow the professor to monitor what students learn in the simulation. The professor's debrief, done after the class discussion, allows the professor to remind the students how this simulation is connected to the learning objectives.

II
MODULES AND LEARNING OBJECTIVES

The week-long modules build on what was covered in previous modules. Each module has a set of learning objectives and correlated learning materials. The assignments for each module are designed to reinforce the learning objectives.

For the first module, titled "The Nature of Conflict," the students have five learning objectives. At the end of the module, students

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9 *See* Stuckey, *supra* note 3, at 814–24.

10 *See* MALHOTRA & BAZERMAN, *supra* note 6, at 143–47.

should be able to: (1) correctly identify different types of conflict, (2) evaluate the relationship between a conflict and a dispute, (3) recognize the different approaches to conflict, (4) gather insight into their default orientation to conflict, and (5) be able to explain how conflicts can be destructive and constructive. The learning materials include several readings on the nature of conflict, the role of litigation in environmental disputes, a video from the professor on approaches to negotiation, and a video from William Ury on the nature of conflict. Assignments for this module include a group discussion, a group negotiation in a discussion board, and a short writing assignment.

In the second module, titled "Negotiation Theory: Claiming and Creating Value," the learning objectives state that students will be able to: (1) respond effectively and appropriately to questions, (2) ask creative and convincing open-ended questions to gather information, (3) ask clear and probing direct questions to clarify information, and (4) recognize the advantages and disadvantages of cooperative versus competitive processes in general and in environmental negotiation. The learning materials include readings on core negotiation theory and videos that demonstrate different negotiation approaches. Assignments for this module include a single issue, value-claiming negotiation, a prisoner's dilemma simulation, and discussions on the negotiation. The negotiation takes place synchronously through a chat tool or a recorded videoconference.

The third module, titled "Environmental Decision Making," has three learning objectives. Upon completion, students will be able to: (1) recognize the process choices available to agency decision makers, (2) recognize the process choices available to proponents and opponents, and (3) analyze environmental conflict and assess the appropriateness of specific strategies over time. The reading materials explore decision-making regimes like local land use decisions and environmental review processes. In addition, students read case studies that show how different processes (litigation, negotiation, mediation, public education, and legislative advocacy) are used to achieve meaningful environmental solutions. The assignments in this module are organized to give the students an opportunity to reflect on the negotiation simulations in the first two modules and explore their assumptions about the effectiveness of different processes. In addition, students start researching and drafting the case study that will be their final project.

Module four, titled "Negotiation Theory-Barriers to Agreement," is designed to help the students understand the variety of barriers to settlement that can arise in environmental disputes. The learning objectives are organized to help students: (1) develop a strategy to explore resistance in negotiation, to identify the source, and uncover hidden information, (2) construct a conversation to avoid cognitive biases that can obstruct agreement, (3) know when negotiating benefits your client/position and when it should be avoided, and (4) negotiate as a team in an environmental dispute. The learning materials include readings that focus on the biases negotiators confront and some videos illustrating those points. The assignments for module four include another simulation that builds on the complexity of the previous simulation. This multi-issue simulation is conducted between a pair of two-student teams. The students have a discussion space to prepare and communicate with their partners. Then, they negotiate asynchronously in a separate discussion board. Students must also submit their final project outline during this module.

In the fifth module, titled "Negotiating and Mediating Environmental Disputes," the learning objectives state that students will be able to: (1) examine and evaluate a "conflict assessment" to understand how this tool can assist in the initiation of a collaborative process, (2) recognize when collaborative negotiation processes are appropriate and when they are not, and (3) describe the stages of a collaborative process. The learning material includes readings on the intricacies of environmental mediations and negotiations such as conflict assessments. In addition, the materials contain more videos on collaborative approaches to land use disputes and useful negotiation techniques. The assignments require students to participate in a discussion about the different conceptions of consensus and to reflect on their simulated negotiation in module four.

Module six, titled "Multi-party Negotiation and Dispute System Design," introduces the complications of negotiating with more than two parties as well as the idea of how disputes arise (and can be resolved) within a system. After this module, students will be able to: (1) apply the lessons learned in two-party negotiations to multi-party negotiations, (2) sequence a series of agreements to assist in the creation of a multi-party agreement, (3) demonstrate an awareness of how streams of disputes move through a system, and (4) recognize how environmental disputes fit into systems of decision making. The

learning includes readings on group decision making—such as groupthink, group polarization, and sequencing—and dispute system design. Assignments include discussions and a multi-party negotiation that takes place asynchronously over a discussion board.

The course closes with module seven, titled "Participating in and Advocating for Environmental Negotiations." Upon completion, students will be able to: (1) advocate for appropriately designed collaborative processes, (2) appropriately advocate for their clients in environmental negotiations, and (3) recognize how environmental mediation can be abused. The learning materials include readings on challenges to collaboration, critiques of environmental mediation, and a framework for implementing effective processes that comply with legal requirements. The final assignments include a reflection on the multi-party negotiation, a discussion answering questions about the readings, and the case study.

III
COURSE INSTRUCTION

Teaching in an asynchronous online format allows the professor to interact with students in a variety of ways not possible in a residential format. Students do not show up in class at a designated time to listen to the professor and raise their hand when they have a question. Instead, students begin the module by reading and interacting with the material mindful of the assignment deadlines for that week. The professor's design of the course organizes the students' learning process. For example, the professor will ask students to introduce themselves at the beginning of the course as a way for them to learn about each other and for the professor to understand what experiences each student brings to the course. In addition to providing a syllabus, the professor may also send out weekly reminders about what will be covered and how it relates to the learning objectives of the course. Feedback on discussion boards, comments on written assignments, and simulation debriefs through podcasts or narrated slides are other ways that the professor can shape the learning process. The importance of providing students with feedback on assignments in the asynchronous platform cannot be overstated. The assignments are how the students demonstrate their knowledge of the material, whereas feedback is how professors reinforce certain concepts and correct students when they make incorrect statements or demonstrate incomplete understanding of the material.

Students are encouraged to introduce themselves at the beginning of the course. These introductions reveal information that normally might not surface when teaching in a face-to-face classroom and can be very useful when commenting on discussions and observing simulations. For example, knowing a student has a background in law enforcement allows the professor to ask questions connecting the learning objectives with their experience. Similarly, students are able to ask their peers to elaborate when a topic comes up related to their experience. In the residency context, this information may come out at some point, but neither as reliably nor as timely.

Some professors restate the learning objectives at the beginning of the week. These announcements can draw specific connections between the learning objectives and the readings and assignments. This helps the students understand why material is assigned and may help them feel more invested in completing the assignments and participating in the course. Announcements can be used to introduce a news article about a current environmental dispute that has lessons related to the objectives of that module. This helps students see the theory in action. An announcement can also be made mid-course to remind the students what has been covered and what will be covered in the future. By making this reminder, the professor connects the students with the material and reminds them how information evolves throughout the class.

Feedback on assignments is one of the principal methods of instruction in this course. The three general categories for assignments in this course are threaded discussions, simulations, and writing assignments. The multiple opportunities for feedback are notable advantages of asynchronous instruction. Since each student must participate in each assignment, there is no option to sit in the back of the room. Each week, the professor must assess each student on his or her performance in the assignments. Depending on the nature of the assignment, the feedback will vary in intensity. For threaded discussions, the feedback may be more Socratic than feedback on written assignments. Since the threaded discussions are iterative, the professor can engage students in a dialog by questioning points they have made and asking how those ideas may be applied in other contexts and then follow up. Feedback on written assignments after they are submitted is more static. In simulations, the feedback is the most dynamic because it can come in many forms. Feedback can be provided during the preparation stage, during the negotiation, during whole-class discussion after the negotiation, after the

assignment is complete, and after students reflect on their performance.

IV
OBSERVATIONS OF INSTRUCTIONAL METHODS

Clearly, teaching online is different from teaching in a face-to-face context. As professors and students, we have all had wonderfully rewarding experiences in the classroom. At the same time, we have all had very frustrating experiences in the classroom. What made these experiences effective or frustrating had less to do with the format of instruction (in-person lecture or seminar) and more to do with the professor's ability, her preparation, the subject matter, and students' involvement in any discussion. The same is true in the distance-learning environment. Some courses are excellent experiences and others are frustrating. Much of this is determined by the professor's ability to teach, familiarity with the subject matter, and commitment to the distance-learning format.

Effective learning can occur through a variety of approaches. The asynchronous distance-learning format provides many avenues for students to learn the same type of material as a face-to-face, lecture-based format.[11] In this section, I make some observations about teaching Environmental Dispute Resolution in the face-to-face, synchronous environment and the asynchronous, distance-learning environment. The first two observations address the challenges raised in the introduction: how would negotiation skills be taught in the distance-learning environment and would the experience be similar to the quality of the face-to-face environment?

A. Distance-Learning Technology Both Limits and Enhances the Ability to Learn Negotiation Skills

I discovered that important negotiation skills can be taught in the distance-learning environment. I also found that these skills are not the same as the skills that can be taught easily in the face-to-face

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[11] *See generally* TISHA BENDER, DISCUSSION-BASED ONLINE TEACHING TO ENHANCE STUDENT LEARNING: THEORY, PRACTICE, AND ASSESSMENT 69–239 (2d ed. 2012); Paul L. Caron & Rafael Gely, *Taking Back the Law School Classroom: Using Technology to Foster Active Student Learning*, 54 J. LEGAL EDUC. 551 (2004); Joseph A. Rosenberg, *Confronting Clichés in Online Instruction: Using a Hybrid Model to Teach Lawyering Skills*, 12 SMU SCI. & TECH. L. REV. 19; Weiss, *supra* note 2.

environment. For example, in many of the simulations that took place in a discussion board, the students had time to contemplate their answer before responding. Because students had time to formulate their answers, they had time to strategize and be more intentional in their responses than is otherwise possible in the face-to-face environment. In "Deal or No Deal," Spencer and Hardy state:

> [s]tudies have found that e-negotiation: Allows more time for preparation, the assessment of offers and counter-offers, and the possibility of integrating time pressures in tactics; Lessens social pressures, by giving students the ability to remain anonymous, and thus the opportunity to experiment with different approaches, or to conceal their gender or ethnicity; and Made it difficult for students to establish rapport, a good relationship and build trust, as it can be difficult to interpret others' behaviour.[12]

One limitation of the distance-learning format is the number of parties who can participate in the simulation. In the face-to-face version of my EDR class, I can run simulations with up to seven or eight parties. Based on current technology and the constraints of the learning management software (LMS), the maximum number of parties I have used in the distance-learning course is three. This presents some problems because many environmental disputes have a large number of negotiating parties. Ideally, both versions of this course will provide students with an opportunity to experience the dynamics of multi-party processes. Until that time comes when adequate software is available to accommodate multiple party negotiations, the distance-learning version provides exposure that helps students learn the basic skills needed when multiple parties are involved. For example, a three-party simulation can introduce some of the basic lessons that are confronted when moving beyond a two-party context. In addition, two-party simulations can be conducted with two representatives on each side. This format allows the students to experience "away-from-the-table" negotiations as well as "at-the-table" negotiations that are a common feature of multiparty negotiations.

B. The Process of Information Exchange Is Altered, but Not Necessarily the Result

Since some of the simulations used in both courses are the same, I can compare the results to see if instructional methods affect the

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12 *See* Spencer & Hardy, *supra* note 2, at 97.

outcome. While I have not conducted a quantitative assessment of the results, there are some interesting patterns to point out. Obviously, information flows differently among parties depending on whether negotiations take place face-to-face or in a technology-mediated environment. In the face-to-face course, communication occurs both verbally and nonverbally. Parties learn from each other not only by what they are saying, but how they say it. Cues such as body language, pitch, tone, and inflection reveal as much information as the content of the communication. In these environments, negotiators learn to construct their strategy based on the suite of information they receive from the interaction.

Before teaching this course, I wondered if a technology-mediated negotiation would result in an inferior outcome because of inherent limitations on nonverbal communication. Without the cues of a face-to-face interaction, I expected that the distance-learning format would leave negotiators with fewer opportunities to discover information. After teaching the course several times, I am seeing that students have other ways of picking up information aside from the nonverbal cues. In some of the distance-learning simulations, students are able to find out similar information as their counterparts in the face-to-face course. While they do not engage in a similar pattern of back-and-forth verbal questioning and responding to nonverbal cues, they are able to extract relevant information. As a result, they are able to make similar integrative deals as students in the face-to-face courses. One main reason for this result may be that students used discussion boards to share information about multiple issues at once. Many students used the discussion boards to make package offers from the beginning—this is particularly true in the multi-issue negotiations that lend themselves to integrative bargaining. Once a package offer is made, the responses make attempts to alter or add to the proposed package. This process of exploring the options in the discussion board thread tends to lead students to identify similar joint gains that students find in the same simulation in the face-to-face course.

C. The Distance-Learning Format Creates Unique Opportunities for a Professor to Observe Each Simulation from Beginning to End

This allows the professor to provide feedback on each student's performance as they move through the course. Simulations in my EDR course may occur over a chat tool, on a discussion board, or with the help of a recorded videoconference. All of these tools allow

me to observe the negotiation and offer feedback both during and after the simulation.

To maximize opportunity for feedback, the course is structured so that students conduct simulations on alternate weeks. The simulations began with some process of preparation, such as a written overview of their strategy, then the actual negotiation followed by a full class debrief of the exercise. All of these activities take place over one module. The professor gives individual feedback on the preparation materials during the negotiation (either in the process or once complete) and during the full class debrief. Once all of this is complete, the module is closed, and the professor shows an audio, video, or narrated slideshow to summarize the purpose of the simulation and offer some comprehensive observations on the students' performance. Students are then required to write a reflection on their experience with the simulation and their thoughts on the professor's feedback. This type of tailored feedback is appreciated by the students[13] and helps complete their experiential learning process.

D. There Is No Back of the Room

Another advantage of the technology is that the professor has access to all of the students' interactions in the negotiation exercises. In the face-to-face format, professors can only observe one or a portion of the simulations conducted simultaneously, whereas, in the distance-learning format, the professor can check in on all of the negotiations, keep track of what is going on, and respond to each student's experience. Accordingly, students can get more feedback from the professor on their performances in the simulation than is possible in the face-to-face context.

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[13] Here are some observations from the student evaluations of the course: "The post-exercise summaries by the Professor were very helpful." "This is the first example of this in any of the classes and it was great." "He was able to take specific examples from the processes and illustrate key class points; the video presentations by the Professor after negotiation exercises were completed were very effective." "He was able to take general examples from what he saw and really use those as teaching moments." "This was definitely the most effective use of videos I have experienced in 6 classes; I greatly appreciated the video commentary posted after the assignments."

E. Limiting Enrollment to Sixteen Students Helps in the Distance-Learning Environment, and It Would Help in the Face-to-Face Environment as Well

This is a rather obvious point. Our distance-learning courses have limited enrollment to sixteen. It is much easier to give personalized instruction to sixteen students than to thirty or forty, which is how many I typically have in my face-to-face course.

F. Asynchronous Format Gives the Professor a Much Better Understanding of Students' Ability and Effort

One of the things that I noticed when teaching online was that I had much greater access to students' work than I did in the face-to-face course. In the online course, I was able to see every post students made in the discussion board, and I was able to watch their preparation for negotiation, their performance in that negotiation, and their reflection on their performance. Since much of this interaction was conducted in writing, I was able to judge their attention to detail, their ability to think clearly, and the extent of their participation. In addition to assessing their assignments, the LMS allowed me to observe how often they accessed the material in the course and where they went within the course. While I can look at the classroom in a face-to-face environment and assess from body language whether or not students comprehend the material, I am never quite sure. The distance-learning environment allows me to more accurately gauge how students are processing the material. If all the discussions in a particular module are off-point, I am able to correct the flow of the discussion and direct students toward the information I had hoped they would learn. This is a level of instruction that is not possible in the face-to-face environment.

CONCLUSION

These are exciting times in the world of education. New technologies are being used to teach courses that we have taught face-to-face for many years. Current methods of distance learning offer advantages beyond cost and convenience. Some of these methods can be used to improve the learning process. Approaches are still evolving and research is still being conducted, but in the near future we will see the broad acceptance of technology-mediated distance education. Innovative instructional methods have already been used to create

learning environments that are arguably equivalent to those that we have created in the residential classroom.[14] These asynchronous methods are far more interactive than synchronous massive open online courses and should not be confused with this popular approach.

Another area of growth in education is the use of hybrid distance/face-to-face instruction. Hybrid approaches take face-to-face courses and supplement them with asynchronous elements.[15] This allows the professor to take advantage of the benefits of those approaches and combine them in one course. The acceptance of these approaches will likely be challenged,[16] but continued emphasis on the advantages and an honest assessment of limitations are likely to lead to greater integration of distance-learning methods into traditional methods of instruction.

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[14] U.S. DEP'T OF EDUC., EVALUATION OF EVIDENCE-BASED PRACTICES IN ONLINE LEARNING: A META-ANALYSIS REVIEW OF ONLINE LEARNING STUDIES (2010), *available at* www2.ed.gov/rschstat/eval/tech/evidence-based-practices/finalreport.pdf.

[15] Rosenberg, *supra* note 11, at 21 n.7.

[16] Caron & Gely, *supra* note 11, at 555–58 (explaining the "backlash" against the adoption of technology as a distraction to legal education).