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The Analytic Classroom

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The Analytic Classroom

TODD E. PETTYS †

INTRODUCTION

> We have learned so relatively well how to do one kind of teaching that we sit Narcissus-like before the pool. We go on teaching cases—and do too little teaching else. Well, then, so be it.
>
> — Karl Llewellyn[1]

In this Article, I propose a shift in law schools' approach to teaching doctrinal courses. The proposal flows in large part from three separate developments: (1) the rise of strong economic headwinds in the market for legal education;[2] (2) the emergence of empirical evidence that law schools are falling short of their goal of equipping students with powerful analytic abilities that transcend the particular doctrinal frameworks law schools teach;[3] and (3) the incipient revolution in higher education, with prestigious universities now aggressively pursuing the opportunity to provide the public with free or low-cost access to many of their courses through the Internet.[4]

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1. KARL N. LLEWELLYN, THE BRAMBLE BUSH: THE CLASSIC LECTURES ON THE LAW AND LAW SCHOOL 146 (Oxford Univ. Press 2008) (1960) (publishing a series of lectures that Llewellyn delivered to students at the Columbia Law School during the 1929–1930 academic year).

2. *See infra* notes 11-17 and accompanying text.

3. *See infra* Part II.

4. *See infra* Part III.

Prior to the recent contraction in the global economy,[5] several forces—including a steady supply of applications for admission,[6] ever-higher tuition rates,[7] and a robust job market for law graduates[8]—shielded American law faculties from having to confront the possibility that their three-year programs of study might be less transformative than they could be. Of course, there had been calls for reform of one sort or another. The authors of the 1992 MacCrate Report, for example, had urged law schools to pay greater attention to teaching "lawyering skills" and the "values of the profession."[9] Similarly, the authors of the 2007 Carnegie Report had called on legal educators to develop curricula that would better integrate "each aspect of the legal apprenticeship—the cognitive, the practical, and the ethical-social."[10] For deans and professors who were enjoying satisfying professional lives under the status quo, however, it was difficult to perceive a need for fundamental change. They could take their schools' rising tuition and admission-application and job-placement numbers as signals that they were doing their jobs reasonably well.

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5. *See* JEFFREY M. ROSENBERG, THE CONCISE ENCYCLOPEDIA OF THE GREAT RECESSION 2007–2010 276 (2010) (stating that the recession in the United States was "the longest since the Great Depression" and providing brief comparisons to prior economic contractions).

6. *See Data: LSAC Volume Summary*, LSAC, http://www.lsac.org/LSACResources/Data/LSAC-volume-summary.asp (last visited July 16, 2012) (providing admission data for each year from fall 2002 through fall 2012).

7. *See* AM. BAR ASS'N, LAW SCHOOL TUITION 1985-2011, http://www.americanbar.org/content/dam/aba/administrative/legal_education_and_admissions_to_the_bar/statistics/ls_tuition.authcheckdam.pdf (last visited July 17, 2012) (charting the steady rise of tuition rates at public and private law schools from 1985 forward).

8. Nearly 92% of the Class of 2007, for example, had found employment within nine months of graduation. *See* EMPLOYMENT FOR THE CLASS OF 2011—SELECTED FINDINGS, NAT'L ASS'N LAW PLACEMENT 1 (2012), *available at* http://www.nalp.org/uploads/Classof2011SelectedFindings.pdf [hereinafter CLASS OF 2011]. That placement figure represented a 23-year high. *See id*.

9. AM. BAR ASS'N TASK FORCE ON LAW SCHOOLS AND THE PROFESSION: NARROWING THE GAP, LEGAL EDUCATION AND PROFESSIONAL DEVELOPMENT—AN EDUCATIONAL CONTINUUM 138-41 (1992) [hereinafter THE MACCRATE REPORT].

10. WILLIAM M. SULLIVAN ET AL., EDUCATING LAWYERS: PREPARATION FOR THE PROFESSION OF LAW 191 (2007) [hereinafter THE CARNEGIE REPORT].

In the wake of the Great Recession, it is far easier to find a sense of reformist urgency among legal educators.[11] The litany has become familiar. Employment rates for law graduates have dropped steadily every year since 2008; only 86% of the class of 2011, for example, had landed jobs nine months after graduation.[12] Of those members of the class of 2011 who had secured employment nine months out, only 65% had found jobs for which Bar passage was a prerequisite—the lowest percentage ever recorded by the National Association for Law Placement.[13] Squeezed by resource-strapped clients, law firms are less willing to hire

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11. *See* Hannah Hayes, *Recession Places Law School Reform in the Eye of the Storm*, PERSPECTIVES, Spring 2010, at 8-9, 14 (2010) (quoting numerous legal educators for the proposition that the Great Recession is pushing law schools to consider a variety of curricular reforms aimed at increasing the marketability of their students). This is not the first time that global events have spurred talk of reform in American law schools. Writing during World War II, for example, Karl Llewellyn and the other members of the Association of American Law Schools' Committee on Curriculum noted "the widespread dissatisfaction which law teachers . . . have been experiencing and expressing in regard to their classes during these war years." *See* ASS'N OF AM. LAW SCH. COMM. ON CURRICULUM, THE PLACE OF SKILLS IN LEGAL EDUCATION (1944), *reprinted in* 45 COLUM. L. REV. 345, 345 (1945) [hereinafter COMMITTEE ON CURRICULUM]. Llewellyn and his colleagues believed they had pinpointed the source of the problem:

> We believe [this dissatisfaction] rests on the fact that we have been teaching classes which contain fewer "top" students. . . . [U]ntil recently the gratifying performance of our best has floated like a curtain between our eyes and the unpleasant realization of what our "lower half" has *not* been getting from instruction. In the war classes this curtain is thin, scanty or absent . . . .

Id. Urging law faculties to confront their teaching's shortcomings, the committee drew an analogy to America's manufacturing efforts. Prior to the war, they wrote, the nation's methods of production had seemed satisfactory. *Id.* at 348. The demands of the war, however, had "forced upon our engineers a recanvass of production methods from the ground up . . . ." *Id.* So too, they said, the wartime absence of some of their most talented students had drawn back the curtain, revealing the need for American law schools to search for ways to achieve better educational outcomes for the entire student body. *See id.* For a brief discussion of the committee report's impact, see ROBERT STEVENS, LAW SCHOOL: LEGAL EDUCATION IN AMERICA FROM THE 1850S TO THE 1980S 214-16 (1983).

12. *See* CLASS OF 2011, *supra* note 8, at 1.

13. *See id.* at 2; *see also* Joe Palazzolo, *Law Grads Face Brutal Job Market*, WALL ST. J., June 25, 2012, at A1("Nationwide, only 55% of the class of 2011 had full-time, long-term jobs that required a law degree nine months after graduation.").

graduates who need extensive on-the-job training.[14] Meanwhile, tuition at numerous law schools now approaches or tops $50,000 per year.[15] The average law student graduates with nearly $100,000 in debt, yet is far from assured of a starting salary that will make that debt easy to manage.[16] Not surprisingly, law schools are receiving dramatically fewer applications for admission.[17] A variety of forces thus prod us toward a fundamental question: Are we maximizing the transformative educational potential of our students' time with us?

I take up that question in this Article. In doing so, I frame the query somewhat more narrowly in two different ways. First, when evaluating whether we are maximizing the potential of our students' educational experience, I want to focus on law schools' longstanding claim to produce high-powered graduates with analytic skills that are coveted not only within the legal profession, but in numerous other sectors of society, as well.[18] In an era when jobs are

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14. *See* Hayes, *supra* note 11, at 8 ("Clients hit hard by the recession don't want to pay for an inexperienced associate."); Benjamin Spencer, *The Law School Critique in Historical Perspective* 4 (Mar. 6, 2012), *available at* http://ssrn.com/abstract=2017114 (stating that the recession has left law firms less able and less willing "to subsidize the on-the-job training of law graduates").

15. *See* BRIAN Z. TAMANAHA, FAILING LAW SCHOOLS ix (2012) ("Annual tuition at over a half-dozen law schools topped $50,000 in 2011, with a dozen more poised to follow. After adding living expenses, the out-of-pocket cost of obtaining a law degree at these schools reaches $200,000.").

16. *See id.* ("Nearly 90 percent of law students borrow to finance their legal education, with the average law school debt of graduates approaching $100,000."); *id.* at xi (stating that the median starting salary for the Class of 2010 was about $63,000).

17. *See Applications down 15.6%, but Admits could be even lower*, NAT'L JURIST (Apr. 24, 2012, 5:00 AM), http://www.nationaljurist.com/content/applications-down-156-admits-could-be-even-lower ("While the numbers are not final, it appears the total number of applicants will be down from 87,500 in 2010 to less than 67,000 this year. . . . This year's applicant pool will likely be the smallest since 1996, when there were 21 fewer law schools . . . .").

18. *See* Robert M. Lloyd, *Consumerism in Legal Education*, 45 J. LEGAL EDUC. 551, 554 (1995) (noting law schools' longstanding claim to train their students in a form of "disciplined thinking" that equips them "to be leaders in business, government, education, or whatever"); Mary A. Lundeberg, *Metacognitive Aspects of Reading Comprehension: Studying Understanding in Legal Case Analysis*, 22 READING RES. Q. 407, 409 (1987) ("Legal educators profess to build minds rather than fill them. Indeed, they claim not to teach rules of law, but

relatively scarce, it seems especially appropriate to evaluate our performance through that lens.

Second, I want to focus on the pedagogical power of the doctrinal courses that have long dominated the curriculum at American law schools—courses whose titles and catalogue descriptions indicate that they are aimed at introducing students to specified bodies of substantive and procedural law.[19] I have, in turn, two main reasons for homing in on our doctrinal teaching. First, aside from the occasional addition or rearrangement of courses, our doctrinal curriculum has emerged largely unscathed from a century's worth of talk about law school reform.[20] As Nancy Rapoport has put it, "there's very little innovation at the core of legal education. We're still playing Christopher Columbus Langdell's song—not his song of innovation in legal education, but the monotonous refrain of education in the form of Socratic classes and case law."[21] To the extent that there have been major curricular reforms over the past half century, the most significant of them have been implemented by adding new personnel to law schools' faculties—clinicians and legal-writing professors, in particular.[22] Even staunch advocates of reform have assured

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rather, to teach students how to think like lawyers."); *cf.* Derek C. Bok, *A Challenge to Legal Education*, HARV. L. SCH. BULL, Fall 1979, at 13 (1979) ("[L]aw school has always been the last refuge of the able, ambitious, but vocationally uncertain student.").

19. *See* STEVENS, *supra* note 11, at 210 (stating that, by the late 1940s, law schools across the country primarily offered "'bread and butter' courses" aimed at teaching the kinds of subject matters that were likely to appear on Bar examinations); Spencer, *supra* note 14, at 50 (observing that most law schools today continue to focus primarily "on doctrinal courses and the transmission of substantive knowledge").

20. *See* Spencer, *supra* note 14, at 22 ("[W]hen one canvasses the various assessments of formal legal education over the past 130 years it is remarkable how consistent the criticisms are and how persistent the Langdellian model has been in the face of these critiques.").

21. Nancy B. Rapoport, *Eating Our Cake and Having It, Too: Why Real Change Is So Difficult in Law Schools*, 81 IND. L.J. 359, 366 (2006); *see also* THE CARNEGIE REPORT, *supra* note 10, at 23-24, 50-51 (observing that the case-dialogue method remains law schools' "signature pedagogy").

22. *See* STEVENS, *supra* note 11, at 214-16 (describing the spread of clinics beginning in the 1950s); Melissa H. Weresh, *Form and Substance: Standards for Promotion and Retention of Legal Writing Faculty on Clinical Tenure Track*, 37 GOLDEN GATE U. L. REV. 281, 284-89 (2007) (describing the rise of legal writing

those of us who teach doctrinal courses that we are satisfactorily achieving our core historic objectives by using time-honored instructional techniques.[23] If, in reality, the pedagogical power of our doctrinal courses is overhyped—as I shall argue it is—then taking a critical look at how we spend those classroom hours could yield significant educational gains.

The second reason to focus on our doctrinal courses springs from the fact that concerns about subject-matter coverage frequently push both faculty and students to behave in ways that blunt those courses' educational power.[24] So far as the faculty's side of the equation is concerned, we have long said that our courses' subject matters are often mere vehicles for using appellate decisions and the Socratic method to teach analytic skills.[25] But as legal educators have recognized throughout this Langdellian era, the desire to provide students with a broad survey of courses' subject matter has always been at war with the time demands of intensive Socratic instruction.[26]

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programs); *see also* ELIZABETH MERTZ, THE LANGUAGE OF LAW SCHOOL: LEARNING TO "THINK LIKE A LAWYER" 27 (2007) ("Today, some of the most innovative ideas about improving law teaching can be found in the scholarship of clinical and legal writing law professors.").

23. *See, e.g.*, THE CARNEGIE REPORT, *supra* note 10, at 75 (stating that the traditional case-dialogue method "seems well suited to train students in the analytical thinking required for success in law school and legal practice"); THE MACCRATE REPORT, *supra* note 9, at 243 ("Many aspects of the skill of legal analysis and reasoning, an important element of professional training, have long been effectively taught through appellate case analysis.").

24. *See infra* Part I. Throughout this Article, I use the term "coverage" in a somewhat negative fashion, insofar as I use it to describe an activity that often displaces other activities that would be more educationally and analytically powerful in the classroom. I nevertheless am not using the term "coverage" in the even more negative sense in which that term is used in some other circles. *Cf.* GRANT P. WIGGINS & JAY MCTIGHE, UNDERSTANDING BY DESIGN 16 (2d ed. 2005) ("*Coverage* is a negative term (whereas *introduction* or *survey* is not) because when content is 'covered' the student is led through unending facts, ideas, and readings with little or no sense of the overarching ideas, issues, and learning goals that might inform study."). My perception is that we, in legal education, use the term "coverage" to describe what Wiggins and McTighe call "surveys," and so I use the term "coverage" accordingly.

25. *See, e.g.*, LLEWELLYN, *supra* note 1, at 99 ("One could make twenty courses which we have not, and no school has, and substitute them for twenty that we give, and no great difference would be made in grand utility.").

26. *See infra* notes 50-52 and accompanying text.

With only a few exceptions scattered here and there among our faculties, that war ended long ago, with the "pure" Socratic method giving way to less time-consuming exchanges between faculty and students, greater transparency in professors' conveyance of doctrinal information during those exchanges, and coverage-friendly lectures whenever Socratic dialogue is incompatible with the desire to move steadily through material that Bar examiners or we ourselves deem important.[27] If we believe our rhetoric about the primacy of teaching topic-transcending cognitive skills, our doctrinal courses are thus ripe for reassessment.

As for students, they quickly perceive that good grades are essential to maximizing their employment opportunities and that acquiring subject-matter knowledge is essential to obtaining high marks. Many students orient their behavior accordingly, even when it comes at the cost of neglecting opportunities to develop their analytic firepower. Students commonly resist professors who "hide the ball" through a rigorous application of the Socratic method,[28] for example, or who publicly push their students to the point of discomfort.[29] They sometimes opt against taking rigorous courses in which they believe a top grade will be difficult to earn.[30] Many obtain copies of prior students' notes with the hope of anticipating their professors' Socratic questions, and use prior students' outlines and answers to problem sets in order to ease the burden (or minimize the perceived risk) of sorting out the course material for themselves.[31]

In the following pages, I argue that today's market pressures on legal education, together with empirical research about law schools' educational outcomes and the

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27. *See infra* Part I.C.

28. *See* Pierre Schlag, *Hiding the Ball*, 71 N.Y.U. L. REV. 1681, 1684 (1996) ("The problem, as law students see it, is that the Socratic teacher never stops the interrogation long enough to allow the students to get a good look at the ball.").

29. *See infra* note 66 and accompanying text.

30. I am relying here on my own many conversations with students.

31. *See* Robert M. Lloyd, *Hard Law Firms and Soft Law Schools*, 83 N.C. L. REV. 667, 682-83 (2005) ("Sets of course notes with analyses of all the cases and answers to all of the problems circulate at most law schools and there is little acknowledgement of the ethical or pedagogical problems these present.").

emergence of new technological capabilities and corresponding teaching possibilities, all combine to set the stage for an innovation-rich renaissance in American law schools. I argue further that the path to such a renaissance lies in the willingness of many doctrinal faculty to internalize the need for reform in legal education, such that they are pushed in their individual courses to experiment with new approaches to developing the kinds of analytic capabilities that law schools have long claimed as the hallmark of their graduates.[32]

To illustrate what I mean by "internalizing" the need for reform, consider one of the ways in which business leaders have spurred innovation in other settings. As Theodore Levitt, formerly of the Harvard Business School, explained in his celebrated 1960 article *Marketing Myopia*,[33] Henry Ford's invention of the assembly line did not emerge from casual reflection about production methods. Rather, it emerged because he clearly set out his objective—selling automobiles at a specified low price—and then forced himself and his employees to develop the innovations necessary to achieve that goal.[34] Ford explained that he gave his team a target price so low that it would "'force everybody in the place to the highest point of efficiency. The low price makes everybody dig for profits. We make more discoveries concerning manufacturing and selling under this forced method than by any method of leisurely investigation.'"[35]

A comparable path is now available in legal education. A number of faculty members at Stanford University, Harvard University, Princeton University, the University of Michigan, the University of Pennsylvania, the Massachusetts Institute of Technology, and other prestigious institutions are gearing up to "flip" some of their undergraduate courses, using Web-based technology to replace lectures and thereby free up the classroom for higher analytic purposes.[36] Using similar technology, we

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32. *Cf.* Addison Mueller, *There Is Madness in Our Methods*, 3 J. LEGAL EDUC. 93, 94 (1950) (arguing that law faculties suffer when their members "become operators instead of designers").

33. Theodore Levitt, *Marketing Myopia*, 38 HARV. BUS. REV. 45 (1960).

34. *See id.* at 51-52.

35. *Id.*

36. *See infra* Part III.

could go a long way toward introducing our students to doctrinal frameworks *prior* to meeting them in the classroom. We thus would be pushed to confront a provocative question: Building on the doctrinal frameworks to which we would introduce our students beforehand, how could we most effectively use the classroom to increase the clarity and rigor with which our students think?

I proceed as follows. In Part I, I briefly describe the persistent tension between subject-matter coverage and Langdellian teaching techniques. Langdell's disciples insisted that, contrary to earlier thinking, the real purpose of the classroom was to train students to think in lawyerly ways, and that breadth and depth of subject-matter coverage could thus be sacrificed to cognitive training. Sustained criticisms of the techniques that Langdell popularized have led many professors to reduce the rigor with which they use those techniques today, and subject-matter coverage is once again a central programmatic objective. This emphasis on doctrinal exposure reduces the time and energy that professors can devote to students' analytic development.

In Part II, I examine empirical studies that suggest law schools are doing far less than they often claim to develop students' minds in ways that transcend the particular subject matters we teach. If the empirical evidence revealed strong improvements in law students' analytic capacities, one would be reluctant to tinker with time-honored teaching techniques. In reality, however, the evidence points in the opposite direction, provocatively suggesting—even if not conclusively proving—that we are falling short of our goal of transforming our students' cognitive capacities.

Pointing to the pioneering work of faculty members at a growing number of prestigious institutions, I argue in Part III that many of us who teach doctrinal courses should use widely available technology to introduce our students to our courses' doctrinal frameworks before they enter our classrooms. We then could use our face-to-face classroom sessions for activities that build on those frameworks in ways aimed squarely at strengthening our students' analytic capacities.

Finally, in Part IV, I suggest a number of ways in which we might use the newly available classroom time to increase our students' analytic power. I do not aim to provide a comprehensive list of valuable classroom exercises; rather, I hope to persuade the reader that the power of today's

common teaching methods pales in comparison to the power of what we might develop through a period of sustained innovative thinking.

I. THE COVERAGE QUANDARY

Prior to the pedagogical revolution that Langdell launched at the Harvard Law School in 1870, instructors at American law schools typically aimed to give their students comprehensive overviews of the doctrinal principles underlying large bodies of case law.[37] Instructors provided broad surveys of the law through lectures and assigned textbook readings, and often demanded that their students memorize the relevant doctrines and recite them in the classroom.[38] Langdell famously brought a different set of teaching techniques to Harvard, and, in the process, provided a bridge to an era in which many law professors would insist that doctrinal coverage should be of only secondary concern. That rhetoric remains common today, but classroom realities frequently tell a different story.

A. *Langdell's Bridge*

Believing that "[l]aw, considered as a science, consists of certain principles and doctrines," that "the number of fundamental legal doctrines is much less than is commonly supposed," and that the study of only a "moderate" number of cases was sufficient to locate those principles, Langdell concluded that he and his students could ignore huge swaths of case law that treatise-writers had felt obliged to cover.[39] His assigned readings consisted of a manageable number of appellate rulings; through Socratic questioning, he pushed his students to do the hard work of inducing for

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37. *See* ALFRED ZANTZINGER REED, TRAINING FOR THE PUBLIC PROFESSION OF THE LAW 376-77 (1921).

38. *See* JOSEF REDLICH, THE COMMON LAW AND THE CASE METHOD IN AMERICAN UNIVERSITY LAW SCHOOLS: A REPORT TO THE CARNEGIE FOUNDATION FOR THE ADVANCEMENT OF TEACHING 7-8 (1914); REED, *supra* note 37, at 376-77; Bruce A. Kimball, *The Proliferation of Case Method Teaching in American Law Schools: Mr. Langdell's Emblematic "Abomination," 1890-1915,* 46 HIST. EDUC. Q. 192, 194 (2006).

39. C.C. LANGDELL, A SELECTION OF CASES ON THE LAW OF CONTRACTS vi-vii (1871); *see also* Paul D. Carrington, *Hail! Langdell!*, 20 LAW & SOC. INQUIRY 691, 708-11 (1995) (describing Langdell's teaching philosophy).

themselves the principles that those cases purportedly embodied.[40] (Joining others, I will refer to this as the case-dialogue method.)[41] Like the lecturers who preceded him, Langdell regarded subject-matter coverage as his primary objective, but believed that the essential subject matter in his courses could be extracted from a fairly small number of appellate decisions.[42]

By the turn of the century, Langdell's disciples were distancing themselves from the claim that law was a science driven by a fixed set of principles, but holding firmly to Langdell's classroom reliance upon Socratic dialogue and appellate rulings.[43] Cut free from scientific theories, proponents of the case-dialogue method shifted its rationale in an important new direction. Subject-matter coverage was no longer the premier objective; rather, the chief purpose of the case-dialogue method was to train students to think in lawyerly ways.[44] The conviction that the method provided future lawyers with rigorous cognitive training—as well as the financial benefits of a methodology that enabled a lone

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40. *See* REDLICH, *supra* note 38, at 12 (describing Langdell's methodology); Carrington, *supra* note 39, at 708-11 (same). Langdell and other early proponents of the case-dialogue method also believed that this teaching technique was superior to its predecessors because it better captured students' interest. *See* STEVENS, *supra* note 11, at 63 (stating that the case-dialogue method was "more exciting for both teacher and student"); John C. Gray, *The Methods of Legal Education*, 1 YALE L.J. 159, 159 (1892) (stating that the case-dialogue method stimulated greater student interest).

41. *See, e.g.*, THE CARNEGIE REPORT, *supra* note 10, at 3 (adopting this terminology). Although commonly linked, the case method and Socratic dialogue are distinguishable; one could question students Socratically about statutes or other non-judicial materials, for example.

42. *See* C.C. LANGDELL, A SELECTION OF CASES ON THE LAW OF CONTRACTS v (2d ed. 1879) ("The object of [this casebook] has been to develop fully all the important principles involved in the cases, and to that object its scope has been strictly limited.").

43. *See* REED, *supra* note 37, at 378-79 (stating that, by the late 1880s, it was evident that there was no fixed set of legal principles that students simply had to induce from the case law).

44. *See* ROY STUCKEY ET AL., BEST PRACTICES FOR LEGAL EDUCATION 134 (2007) (describing this shift and stating that "[t]he avowed primary purpose of law school in the United States henceforth was not to teach the law but to teach how to think like a lawyer").

instructor to teach large numbers of students[45] and the reputational benefits of adopting a methodology that traced its origins to Harvard[46]—helped fuel the method's propagation at law schools across the country.[47] As Josef Redlich observed in his 1914 report to the Carnegie Foundation for the Advancement of Teaching:

> In the place of the old ideal of instruction, the ideal of imparting the greatest possible amount of knowledge, there has arisen a new ideal: the specific training in that manner of legal thinking which is peculiar to and necessary for the practising lawyer. . . . [T]here can be no doubt that with many American law teachers to-day the tendency is to regard the transmission of positive legal material to the student as a secondary consideration, compared to the special intellectual training provided by the Socratic method.[48]

For more than a century now, committed proponents of Socratic teaching have continued to echo the primacy of cognitive training over subject-matter coverage.[49]

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45. *See* STEVENS, *supra* note 11, at 268 ("It is possible that Langdell's greatest contribution to legal education was the highly dubious one of convincing all and sundry that legal education was inexpensive."); Carrington, *supra* note 39, at 748 (stating that the case-dialogue method became prevalent, in part, because it enabled law schools to enroll large numbers of students without substantially increasing the size of their faculties); Karl N. Llewellyn, *On What Is Wrong with So-Called Legal Education*, 35 COLUM. L. REV. 651, 677 (1935) (stating, in the context of a critique of the case-dialogue method, that "our Trustees have grown sleepily comfortable in the feeling that law schools are cheap").

46. *See* Kimball, *supra* note 38, at 195-96, 220 (concluding that the case-dialogue method's "association with prestigious institutions" was one of several reasons for its spread).

47. *See id.* at 196-220 (describing the spread of the case-dialogue method between 1890 and 1915).

48. REDLICH, *supra* note 38, at 25; *see id.* at 24 (explaining that he heard this rationale "again and again" when visiting American law schools); *see also* LLEWELLYN, *supra* note 1, at 100 ("We do not purport to teach you the rules you need to know. . . . On the other hand, we labor diligently and not without skill at getting you to *handle* the cases when you find them."); STEVENS, *supra* note 11, at 117 (stating that "the case method came to be regarded less as a means of transferring information about substantive rules and more as a means of teaching legal methodology").

49. *See, e.g.*, Phillip E. Areeda, *The Socratic Method (SM) (Lecture at Puget Sound, 1/31/90)*, 109 HARV. L. REV. 911, 915 (1996) ("The essence of the [Socratic method] is not recitation but reasoning and analysis that forces the student to use what he knows (or supposes that he knows) from the assigned judicial opinion (or statute or other materials)."); Bernard D. Meltzer, *The*

B. *A Century of Push-Back*

Despite its ascent to a place of dominance in American legal education, the case-dialogue method has suffered a century's worth of criticism—criticism that has diluted the rigor with which law professors commonly implement the method today. Briefly, these critiques fall into three categories.

The first set of criticisms concerns the issue of subject-matter coverage itself. From the launch of the Langdellian revolution to the present day, many professors have not been persuaded that doctrinal coverage should be sacrificed to the degree to which a patient application of the Socratic method requires.[50] After canvassing teaching practices at American law schools in the 1920s, for example, Alfred Reed wrote that "[t]he [Socratic] method is so onerous, demanding as it does perhaps twice as much time as the [lecture] method, that it increases the probability that the student will have to omit some branches of the law, acquaintance with which would be of value to him in his future practice."[51] Reed's concern was not an isolated objection. As historian Bruce Kimball has written regarding the period from 1890 to 1915, the "frequent objection that [the] case method did not permit coverage of subject matter appeared in catalogs, in professional presentations, and in personal correspondence."[52]

With respect to the doctrinal matters that professors *do* wish to teach, legal educators have long acknowledged that the case-dialogue method is an inefficient means of conveying that information.[53] Roy Stuckey and his co-

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University of Chicago Law School: Ruminations and Reminiscences, 70 U. CHI. L. REV. 233, 241 (2003) (stating that the Socratic method is chiefly and admirably aimed at teaching analytic skills, rather than black-letter law).

50. *See infra* notes 69-74 and accompanying text (noting the present-day emphasis on subject-matter coverage).

51. ALFRED ZANTZINGER REED, PRESENT-DAY LAW SCHOOLS IN THE UNITED STATES AND CANADA 223 (1928).

52. Kimball, *supra* note 38, at 226.

53. *See, e.g.*, COMMITTEE ON CURRICULUM, *supra* note 11, at 367 ("[C]ase-instruction is a singularly slow and wasteful method of imparting information about rules of law to any student who has once mastered the proper 'by-products' of case instruction.") (emphasis omitted); Llewellyn, *supra* note 45, at 676 ("[I]t is ancient learning that as a purveyor of information the pure case-

authors point out that "[t]he best method for imparting information is not likely to be the best method for teaching analytical skills."[54] This puts professors in a bind: shifting to lectures or other efficient information-delivery vehicles undercuts the pedagogical benefits traditionally attributed to the case-dialogue method, yet holding firm to the case-dialogue method precludes coverage of material that many professors believe their students should know.[55] That bind is especially vexing for faculty members who teach at schools where Bar-passage rates are a matter of concern and where coverage of basic doctrine is correspondingly stressed.[56]

The second set of criticisms leveled against the case-dialogue method concerns the charge that it does not sufficiently introduce students to skills and activities that are likely to be important in their professional lives. In 1908, for example, Henry Ballantine sounded a theme that one frequently hears today—namely, that the case-dialogue method might prepare students well for a career on the bench or in academia, but it falls short of preparing students for the work they will do when representing clients.[57] Leading the way for modern-day advocates of the problem method, Ballantine urged law faculties to force their students to work through complex factual disputes (whether real or hypothesized), rather than repeatedly study the ways in which appellate courts resolved past

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method is close to pure waste."); Karl N. Llewellyn, *The Current Crisis in Legal Education*, 1 J. LEGAL EDUC. 211, 215 (1948) ("[I]t is obvious that man could hardly devise a more wasteful method of imparting *information about subject matter* than the case-class. Certainly man never has."); Frank R. Strong, *The Pedagogic Training of a Law Faculty*, 25 J. LEGAL EDUC. 226, 235 (1973) (making this point).

54. STUCKEY ET AL., *supra* note 44, at 130.

55. *See* Llewellyn, *supra* note 53, at 215-16 (noting this quandary).

56. *Cf.* Douglas K. Rush & Hisako Matsuo, *Does Law School Curriculum Affect Bar Examination Passage? An Empirical Analysis of Factors Related to Bar Examination Passage During the Years 2001 Through 2006 at a Midwestern Law School*, 57 J. LEGAL EDUC. 224, 225-26 (2007) (noting the heightened emphasis placed on "Bar courses" at schools with historic Bar-passage problems).

57. *See* Henry Winthrop Ballantine, *Adapting the Case-Book to the Needs of Professional Training*, 2 AM. L. SCH. REV. 135, 135 (1908).

conflicts.[58] Other critics have pointed to additional omissions, such as training in interpreting statutes,[59] advising and dealing with clients,[60] and evaluating potential courses of action when the factual record of a dispute has not yet been developed.[61]

The third set of long-standing criticisms concerns doubts about the degree to which the case-dialogue method really does help students develop the analytic capacities that are commonly invoked as the method's leading justification. I will have more to say on this question in Part II. Here, I merely want to note that concerns of this sort have dogged the case-dialogue method for generations. Some have expressed the view that the method does not effectively reach students of less than above-average talent, such that students who are most in need of help with their analytic skills may be the least likely to receive it.[62] Others have pointed out that most students in large classes are passive listeners during Socratic exchanges, and have questioned whether such passivity can yield significant cognitive gains.[63] Numerous critics have said that while the

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58. *See id.* at 135-39; *see also* Henry Winthrop Ballantine, *Teaching Contracts with the Aid of Problems*, 4 AM. L. SCH. REV. 115, 118 (1916) (making the same argument); COMMITTEE ON TEACHING AND EXAMINATION METHODS, HANDBOOK OF THE ASSOCIATION OF AMERICAN LAW SCHOOLS 85-89 (1942) (urging law professors to move away from the case-dialogue method to the problem method).

59. *See, e.g.*, REED, *supra* note 37, at 379 (pointing to this omission in 1921).

60. *See, e.g.*, *id.* (urging training in client counseling); THE CARNEGIE REPORT, *supra* note 10, at 56-57 (lamenting the fact that the case-dialogue method omits contact with clients).

61. *See, e.g.*, STUCKEY ET AL., *supra* note 44, at 138 (making this point); Todd D. Rakoff & Martha Minow, *A Case for Another Case Method*, 60 VAND. L. REV. 597, 600-04 (2007) (elaborating on this argument).

62. *See, e.g.*, THE CARNEGIE REPORT, *supra* note 10, at 71 (observing that the case-dialogue method might work best when students are already cognitively operating at a high level); *id.* at 75 (stating that the method works best for students who are "primed for challenging analytical work"); Kimball, *supra* note 38, at 228 ("[A] reason routinely cited against adopting [the] case method, even at national university law schools such as Columbia and Michigan [between 1890 and 1915], was that [it] worked well with superior students but poorly with average students.").

63. *See, e.g.*, REDLICH, *supra* note 38, at 51 ("[T]he complete effectiveness of the Langdell method, and for that matter of any instruction which involves an exchange of questions between teacher and student, is always conditioned by the requirement that only a limited number shall take part in the exercises.");

case-dialogue method holds students' attention for a semester or two, students soon grow bored with it and begin to rely more heavily upon their professor or other sources to carry the intellectual load.[64] Many have observed that students commonly regard court rulings as authoritative resolutions of prior disputes; students thus often hurry to memorize those rulings, these skeptics say, rather than devote significant energy to critiquing those rulings' rationales.[65] Others charge that the Socratic method—especially when aggressively implemented—inhibits

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Strong, *supra* note 53, at 235 (stating that, when the Socratic method is deployed, "much of the student 'doing' must be vicarious" and that "there is reason to be highly dubious of the effectiveness of vicarious classroom practice").

64. *See, e.g.*, THE CARNEGIE REPORT, *supra* note 10, at 77 (noting surveys indicating that students get more disengaged as they move through law school, and attributing that disengagement to repeated exposure to the case-dialogue method); LLEWELLYN, *supra* note 1, at 145 (telling second-year students that because they have become accustomed to the case-dialogue method, they are likely to be tempted to spend "less time on the cases" and rely more heavily upon the professor, and to take "[l]ess interest in law, and more in what [the professor] is likely to expect on the exam"); David F. Cavers, *In Advocacy of the Problem Method*, 43 COLUM. L. REV. 449, 453 (1943) ("After the first year, the [casebook] system is not exacting in its demands on any but the morbidly conscientious student."); Walter Gellhorn, *The Second and Third Years of Law Study*, 17 J. LEGAL EDUC. 1, 2-6 (1964) (observing that second- and third-year students commonly "become less and less actively involved in the educational process" and that this disengagement arises, in part, due to boredom with the case-dialogue method).

65. *See, e.g.*, COMMITTEE ON TEACHING AND EXAMINATION METHODS, *supra* note 58, at 87 ("[S]tudents too often regard the cases as authoritative solutions which they need only read and absorb; each case becomes an end in itself, and the educative process stops at the very threshold of its most significant stage."); Ballantine, *supra* note 58, at 117-18 (making this observation and stating that it is a "critical" weakness of the case-dialogue method); Elizabeth Fajans & Mary R. Falk, *Against the Tyranny of Paraphrase: Talking Back to Texts*, 78 CORNELL L. REV. 163, 163-64, 168 (1993) (elaborating on this point); Llewellyn, *supra* note 53, at 212 ("[W]hen students are provided with a set of [judicial] answers, the job of getting them to focus attention on the techniques of solution, rather than on the answers, is difficult."); Myron Moskovitz, *Beyond the Case Method: It's Time to Teach with Problems*, 42 J. LEGAL EDUC. 241, 244-45 (1992) ("Despite all our efforts, many [students] try to skip the emulation [of critical analysis] and simply learn the rules."); John Henry Schlegel, *Damn! Langdell!*, 20 LAW & SOC. INQUIRY 765, 767 (1995) (observing that students' outlines usually contain a "hierarchical structure of rules, treated as if they were efficacious and as if their application may require judgment, but not as if their formulation is problematical").

learning for those who find the method alienating, intimidating, or traumatic.[66] A number of professors have argued that proof of the case-dialogue method's weakness is regularly found in students' end-of-term examinations.[67] David Cavers colorfully made the point in 1943: "Every law teacher who has ever mentioned the matter to me has testified to the depression of spirit, the black sense of discouragement, which assails him when, each January and June, he sees his teaching mangled in the blue books."[68]

C. *Classroom Realities*

In the face of such sustained criticism, it is hardly surprising that the pure case-dialogue method—in which the professor refrains from exposition and drives students through questioning to do the hard work of constructing analytic frameworks on their own—is virtually extinct.[69] Particularly in second- and third-year courses, professors

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66. *See, e.g.*, Lani Guinier et al., *Becoming Gentlemen: Women's Experience at One Ivy League Law School*, *in* BECOMING GENTLEMEN: WOMEN, LAW SCHOOL, AND INSTITUTIONAL CHANGE 27, 50 (1997) ("Several women who were intimidated or not engaged by Socratic-style questioning in large first-year classrooms stated matter-of-factly that they could not learn in such an environment."); Laura Kalman, *To Hell with Langdell!*, 20 LAW & SOC. INQUIRY 771, 771-72 (1995) (describing the detrimental effects of fear of the Socratic method in her own education); Duncan Kennedy, *How the Law School Fails: A Polemic*, YALE REV. L. & SOC. ACTION, Spring 1970, at 71, 73 (stating that many students experience Socratic questioning as "an assault").

67. *See, e.g.*, COMMITTEE ON CURRICULUM, *supra* note 11, at 353 ("We do not believe that any case-instructor can face the 'lower half' of his semi-annual set of blue books, up even through the sixth semester, without recognizing that current case-instruction is somehow failing to do the job of producing reliable professional competence . . . in half or more of our . . . graduates.") (emphasis omitted); Ballantine, *supra* note 58, at 118 ("Examination papers are the best evidence that, in addition to the study of decided cases, the student needs to study and discuss problems.").

68. Cavers, *supra* note 64, at 452; *accord* COMMITTEE ON CURRICULUM, *supra* note 11, at 389 ("We have, above all, to remember our sadly recurring blue-books with their sadly recurring evidence that except for the more gifted students all is far from well.").

69. *See* Lloyd, *supra* note 31, at 681 ("The traditional Socratic method, where the professor not only questioned the student on the material he was to have read but questioned the assumptions underlying the material and even the assumptions behind the student's own belief system, has vanished from American law schools.").

have become far more transparent in their conveyance of doctrinal information.[70] To be sure, the trappings of the case-dialogue method remain prevalent—we continue to focus heavily on appellate decisions, and many of us continue to ask our students numerous questions about the assigned reading and its underpinnings. Moreover, we often continue to claim that subject-matter coverage is largely secondary to cognitive training in our classrooms.[71] As a matter of classroom realities, however, the pendulum has swung back substantially toward (even if it has not fully reached) the pre-Langdellian emphasis on subject-matter coverage.[72] Lee Bollinger has lamented, for example, that even in top American law schools, "[c]overage of doctrine and fields of law is the predominant classroom activity."[73] Nor is this a recent development. Writing in 1964 from his post on the faculty at the Columbia Law School, Walter Gellhorn observed that "[t]he leisurely pace of Socratic dialogue has given way (much more than is usually acknowledged) to variations of the lecture, by which more ground can be covered."[74]

With that dilution of the case-dialogue method comes the risk that the method's purported educational benefits

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70. *See* Bok, *supra* note 18, at 13 (stating that "second- and third-year teachers have abandoned the Socratic method increasingly in favor of the lecture" and that "the Socratic method has [thus] been abandoned long before most students have perfected the very habits of rigorous thinking which the method is so ideally designed to encourage"). *But cf.* MERTZ, *supra* note 22, at 142-44 (acknowledging evidence that the Socratic method is "waning," but noting that we do not have the precise data required to compare one era to another).

71. *See* Lundeberg, *supra* note 18, at 409.

72. *Cf.* STEVENS, *supra* note 11, at 276-77 (stating that, by the 1980s, "in most schools the case method was said to be less rigorous than it once was"). Our undergraduate institutions have similarly failed to hold firmly to an insistence upon teaching critical-thinking skills. *See* RICHARD ARUM & JOSIPA ROKSA, ACADEMICALLY ADRIFT: LIMITED LEARNING ON COLLEGE CAMPUSES 35 (2011) ("Teaching students to think critically and communicate effectively are espoused as the principal goals of higher education. . . . However, commitment to these skills appears more a matter of principle than practice . . . .").

73. Lee C. Bollinger, *The Mind in the Major American Law School*, 91 MICH. L. REV. 2167, 2174 (1993).

74. Gellhorn, *supra* note 64, at 3.

are diluted, as well.[75] In 1995, for example, Robert Lloyd complained that too many law students seem determined "to get the best credential [they] can with the least effort," and that too many professors have accommodated that desire by greatly reducing their efforts to teach "disciplined thinking" through the Socratic method.[76] The disappointments that one sometimes hears expressed in faculty lounges would indeed suggest that a number of our third-year students are continuing to struggle in fundamental ways with the task of conducting competent legal analysis. On the other hand, in positing a link between today's classroom disappointments and the relaxation of the case-dialogue method, it might be a mistake to assume that the case-dialogue method of earlier eras ever fully lived up to its billing. Again, skeptics have long questioned the method's capacity to transform students' analytic abilities.[77] Although some students in earlier years testified to the method's effectiveness in training their own minds, we lack empirical data by which to measure the method's broad results during those periods.[78] Nor can one easily make reliable armchair assessments. Anecdotal evidence from Llewellyn, Cavers, and others indicates that the method yielded less than satisfactory outcomes for a substantial number of their students,[79] but those anecdotes arose before law schools significantly strengthened their admissions standards[80]—and so perhaps many of those students were

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75. *See* Carrington, *supra* note 39, at 748 ("[I]t seems probable that the benefits of case method teaching have diminished in recent decades. Not only are law teachers more concerned about possible real harm to students to which observers point, but they are also perhaps somewhat daunted by heightened concern that students will perceive them to be doing harm."); Kalman, *supra* note 66, at 772 ("If the Socratic method has been diluted, whatever effectiveness it once possessed may have dwindled to the point at which law professors should abandon it.").

76. *See* Lloyd, *supra* note 18, at 552-55.

77. *See* *supra* notes 62-68 and accompanying text.

78. *See* *infra* notes 83-85 and accompanying text (noting the lack of empirical data prior to the 1980s).

79. *See* *supra* note 11 (noting Llewellyn); *supra* note 68 and accompanying text (noting Cavers).

80. *See* STEVENS, *supra* note 11, at 221-22 n.38 (briefly describing the emergence of the Law School Admissions Test in the late 1940s and the sharp increase in law schools' selectivity in the 1950s); Richard H. Sander & E. Douglass Williams, *Why Are There So Many Lawyers? Perspectives on a*

simply incapable of receiving the benefits of an otherwise powerful set of teaching techniques.[81] When trying to assess the pedagogical impact of today's more relaxed application of the case-dialogue method, one cannot make much headway by drawing historical comparisons.

For present purposes, let us set aside any effort to compare the case-dialogue method's effectiveness from one era to the next. What can we say about the method's effectiveness today? By continuing to deploy variations of the case-dialogue method as law schools' "signature pedagogy"[82] in doctrinal classes, are we not only teaching our students legal doctrine, but transforming their analytic capacities, as well?

II. EMPIRICAL CAUSES FOR CONCERN

In the closing pages of his 1983 study of the evolution of American legal education, Robert Stevens reflected on law schools' historic reluctance to engage in the kind of probing self-examination that might lay the foundation for significant institutional change.[83] "Even the core case method," he wrote, "ha[s] been subject to few empirical studies."[84] Just a few years later, writing about legal education from her perspective as an educational psychologist, Mary Lundeberg similarly remarked upon the unproven linkage between law schools' claims and outputs: "Legal educators profess to build minds, rather than fill them. Indeed, they claim not to teach rules of law, but rather, to teach students how to think like lawyers. Whether law schools actually enhance the reasoning skills of law students has not been verified."[85]

Turbulent Market, 14 LAW & SOC. INQUIRY 431, 462-63 (1989) (presenting data indicating the significant rise in admitted law students' LSAT scores between 1969 and 1980).

81. *Cf.* *supra* note 62 and accompanying text (noting the claim that the case-dialogue method only benefits students of above-average intellectual talent).

82. THE CARNEGIE REPORT, *supra* note 10, at 23-24, 50.

83. *See* STEVENS, *supra* note 11, at 276-79.

84. *Id.* at 276; *see also id.* at 269 ("The ability of the case method to develop analytical skills and legal craftsmanship was widely accepted [in the post-War period], even if not readily susceptible of proof.").

85. Lundeberg, *supra* note 18, at 409 (citations omitted).

A quarter of a century later, we still do not have an extensive body of empirical work on the educational effectiveness of the case-dialogue method or on the degree to which three years in a J.D. program improves a typical student's cognitive capacities. Researchers have conducted a handful of studies in these areas, however, and the results do not point in a reassuring direction. I group the most noteworthy research into three categories below: a study comparing the case-dialogue method to other teaching techniques, a study evaluating whether third-year law students show significantly improved analytic capacities in non-legal settings, and a group of studies testing whether third-year law students show significantly improved analytic capacities in legal settings.

A. *The BYU Study: Comparing Teaching Methods*

Edward Kimball and Larry Farmer—faculty members at Brigham Young University's J. Reuben Clark Law School—got the empirical ball rolling for doctrinal legal education in 1979.[86] They set out to compare three different ways of teaching Evidence, then a required second-year course at BYU.[87] To facilitate their study, BYU randomly assigned second-year students to one of three different sections of Evidence, all taught by Kimball.[88] In the first section, Kimball taught in the conventional way, using a mainstream casebook.[89] In the second section, Kimball directed students to read portions of an evidence treatise and then come to class prepared to talk about assigned problems that Kimball had written.[90] In the third section, students were instructed to read portions of an evidence treatise, work through a computer program that presented them with problems that Kimball had written, compare their analyses of those problems to Kimball's own answers

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86. Edward L. Kimball & Larry C. Farmer, *Comparative Results of Teaching Evidence Three Ways*, 30 J. LEGAL EDUC. 196, 196 (1979).

87. *Id.* at 196. Evidence is no longer a required course at BYU. *See Graduation Requirements*, BYU LAW, http://www.law2.byu.edu/page/?id=prospective&cat=admissions&content=requirements_for_graduation#view (last visited July 2, 2012).

88. Kimball & Farmer, *supra* note 86, at 196.

89. *Id.* at 196-97.

90. *Id.* at 197.

and explanations, and then (at their discretion) come to periodic class sessions where Kimball would be available to answer students' questions.[91] At the end of the semester, students in all three sections took the same final examination, containing a mix of objective and essay questions.[92] Kimball and Farmer found that the method of instruction did not have a statistically significant impact upon students' ultimate exam performance.[93] A brief follow-up experiment the following year[94] reinforced their conclusion that "[s]tudents can learn Evidence just about as well by any of several teaching methods."[95]

Research on teaching methods in *non*-legal settings suggests that Kimball and Farmer's conclusion should come as no surprise. Numerous literature surveys have found that, when researchers try to evaluate the comparative effectiveness of teaching methods by comparing the average exam performance of students taught by one method to the average exam performance of students taught by a different method, the different teaching methods commonly appear equally efficacious.[96] To be sure, some individual students learn better when taught by one method rather than another.[97] When comparing the average performance of students within groups, however, those individual differences tend to balance out, such that shifting from one group teaching method to another is unlikely to yield significant net learning gains for the group as a whole.[98] Kimball and Farmer's small study suggests that the case-dialogue method and two of its alternatives are not

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91. *Id.*

92. *Id.* at 198-99.

93. *Id.* at 199.

94. In their second experiment, Kimball and Farmer compared the problem method to the self-instruction method. They found that the students in the problem-method section did better on the essay portion of the final examination, but that the two sections' performances were statistically equivalent on the other portions of the exam. *See id.* at 201-02.

95. *Id.* at 209.

96. *See* Paul F. Teich, *Research on American Law Teaching: Is There a Case Against the Case System?*, 36 J. LEGAL EDUC. 167, 179-82 (1986) (discussing several such literature surveys).

97. *See id.* at 181.

98. *See id.* at 181-82.

exceptions to that rule.[99] If the students who were taught Evidence in the traditional manner developed analytic capacities that the other students did not, Kimball and Farmer's final examination failed to detect it.[100]

Might Kimball and Farmer's results simply suggest that their final examination rewarded knowledge of content to a greater degree than analytic ability? Could it be, in other words, that students who have been taught in the case-dialogue manner will manifest increased analytic capacities when those capacities are effectively targeted by a testing instrument? To answer that question, I turn to two other sets of studies. The researchers who conducted these studies did not single out the case-dialogue method for empirical analysis; rather, they aimed to evaluate the effects of legal education as a whole. Because variations of the case-dialogue method predominate in so many of our doctrinal classrooms, however, any verdict cast on the overarching effects of legal education also gives us important information about the effects of those prevalent teaching techniques, as well.

B. *The Michigan Study: Testing Analytic Skills in Non-Legal Settings*

In the mid-1980s, the University of Michigan Law School's Richard Lempert joined with psychologists Darrin Lehman and Richard Nisbett to take a fresh look at the theory of formal discipline.[101] That theory, which traces its roots to the ancient Greeks and was widely held until the early twentieth century, posits that training in mathematics, foreign languages, grammar, logic, or another rule-driven discipline equips a person to think more accurately and more precisely in other areas of life.[102] The

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99. *See* Kimball & Farmer, *supra* note 86, at 209.

100. *See id.*

101. Darrin R. Lehman et al., *The Effects of Graduate Training on Reasoning: Formal Discipline and Thinking About Everyday-Life Events*, 43 AM. PSYCHOL. 431, 431 (1988).

102. *See id.*; *see also* Richard E. Nisbett et al., *Teaching Reasoning*, 238 SCIENCE 625, 625 (1987) (defining the theory of formal discipline as the notion that people use "abstract, domain-independent inferential rules to think about everyday events" and that people's reasoning ability can "be improved by formal instruction in the use of inferential rules").

theory of formal discipline played a leading role in helping to set educational curricula in the 1800s, when educators commonly stressed "languages and mathematics and other subjects deemed useful for formal discipline and . . . largely excluded the natural sciences and other fields because of their emphasis on mere content."[103] Beginning with a set of studies performed by Edward Thorndike in the early 1900s,[104] and continuing through much of the twentieth century, psychologists attacked that theory, arguing that people learn rules in highly context-specific ways, such that "[l]earning does not transfer from task to task, and subjects do not generalize from a set of tasks to the level of abstract rules."[105]

Lempert, Lehman, and Nisbett set out to test their competing claim that, in fact, there are certain kinds of ways in which formal disciplinary training can improve a person's ability to reason through problems one encounters in everyday life.[106] They posited that there are "pragmatic inferential rules"—or "schemas"—that people routinely deploy, and that facility with these rules can be improved through the kinds of formal disciplinary training one finds in certain areas of graduate and professional training.[107] One such set of rules—which these authors called "contractual schemas"—follows the form of the abstract proposition "if *p*, then *q*," but expresses it in terms of permission or obligation (e.g., "if you want to do X, then you must first satisfy precondition Y," or "if X occurs, then you must do Y").[108] Another such set of rules—called "causal schemas"—follows the form of the abstract proposition "*p* if

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103. Nisbett et al., *supra* note 98, at 626.

104. *See* 2 EDWARD L. THORNDIKE, EDUCATIONAL PSYCHOLOGY: THE PSYCHOLOGY OF LEARNING 403 (1913); EDWARD L. THORNDIKE, THE PRINCIPLES OF TEACHING: BASED ON PSYCHOLOGY 235-37 (1906).

105. Lehman et al., *supra* note 97, at 432; *see also id.* at 431-32 (citing numerous such claims and related studies).

106. *See id.* at 432-34.

107. *See id.* at 432-33; *see also* Patricia W. Cheng, *Pragmatic Reasoning Schemas*, 17 COGNITIVE PSYCHOL. 391, 391 (1985) (arguing that people reason using pragmatic reasoning schemas, "which are generalized sets of rules defined in relation to classes of goals").

108. *See* Lehman et al., *supra* note 97, at 432-33.

and only if *q*," but makes explicit that proposition's "ideas of necessariness and sufficiency in causality."[109]

To test their claim, the three authors conducted a study involving first- and third-year students enrolled in four different graduate and professional programs at the University of Michigan: psychology, medicine, chemistry, and law.[110] Their aim was to determine whether students in their third year of those programs showed greater ability to engage in statistical reasoning (applying "the law of large numbers and the regression or base rate principle"), methodological reasoning (applying "various confounded-variable principles"), conditional reasoning (applying the propositions "if *p*, then *q*" and "*p* if and only if *q*"), and verbal reasoning ("recogniz[ing] arguments, evaluat[ing] evidence, and detect[ing] analogies" when confronted with the kinds of problems that appear in the verbal-reasoning portions of the Graduate Record Examination and Law School Admission Test).[111] The authors conducted the study in two waves—first through a cross-sectional assessment (contemporaneously testing first- and third-year students in those four programs) and then later through a longitudinal study (retesting the first-year students once they reached their third year).[112]

In both waves of the study, the raw scores of the third-year students in all four disciplines were nearly always at least marginally higher than those of their first-year counterparts, but those apparent gains often fell short of statistical significance.[113] In the area of verbal reasoning, only the medical students' improvement was statistically significant; third-year law students' scores failed to reach that threshold.[114] For our purposes here, that is a notable finding. The authors found, in short, that when it comes to

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109. *Id.* at 433.

110. *Id.* at 434.

111. *Id.* at 435; *see also id.* at 442 (reproducing an example of each of the four types of questions).

112. *Id.* at 434, 436.

113. *Id.* at 437.

114. *Id.* (reporting increases of only five percent and four percent for law students in the cross-sectional and longitudinal studies, respectively, and stating that medical students' improvement was statistically significant in both studies).

evaluating arguments and evidence in the kinds of ways that law schools—through their use of the LSAT—deem important for legal analysis, third-year law students at Michigan showed no demonstrable improvement.[115]

In the areas of statistical and methodological reasoning, the third-year psychology and medical students showed significant improvement in both waves of the study.[116] Law and chemistry students demonstrated marginal improvement in their raw scores, but in neither wave of the study did those apparent gains rise to the level of statistical significance.[117] As the authors pointed out, however, one cannot necessarily fault legal education for those results, given that law schools do not typically teach "the statistical and methodological rules of the probabilistic sciences."[118]

The study's results concerning conditional reasoning were somewhat more favorable. Third-year students in law, medicine, and psychology all demonstrated raw gains in the cross-sectional study, though the gains were statistically insignificant.[119] In the longitudinal study, however, third-year students in all three of those disciplines showed statistically significant improvement.[120] Lempert and his colleagues concluded that, contrary to the views of Thorndike and his successors, formal disciplinary "training of some kinds has substantial effects on the way people

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115. *Id.; see also* *supra* note 107 and accompanying text (noting the verbal-reasoning portion of the study).

116. Lehman et al., *supra* note 97, at 437-38.

117. *Id.*

118. *Id.* at 440. Perhaps they should.

119. *Id.* at 438.

120. *Id.* In a subsequent study focused primarily on determining the effects of law students' undergraduate majors on those students' ability to engage in deductive reasoning, two other researchers found that there were no differences in the performance of first-, second-, and third-year students. Mark Graham & Bryan Adamson, *Law Students' Undergraduate Major: Implications for Law School Academic Support Programs (ASPs)*, 69 UMKC L. REV. 533, 547-48, 550 (2001). The authors speculated that their results were in tension with the findings of Lehman, Lempert and Nisbett because their own, smaller study included only seventeen third-year students. *Id.* at 554 (attributing the different results to their own smaller sample size); *id.* at 549 (noting that only seventeen third-year students participated in their study).

reason about some sorts of problems."[121] In their view, students in the fields of law, medicine, and psychology improve their ability to engage in conditional reasoning not because they are taught "the rules of formal logic," but rather because they are taught contractual and causal schemas that happen to track basic logical principles.[122] With respect to legal training in particular, they argued that law schools

> provide substantial instruction and drill in the logic of permissions and obligations, which can be used to solve problems in the conditional [if *p*, then *q*], and it provides additional instruction and drill for other contractual relations, particularly those in which an action must be taken if and only if some other event occurs, which can be used to solve biconditional problems [*p* if and only if *q*].[123]

Their results also indicated, however, that law schools cannot lay special claim to providing training in conditional reasoning. Law students' gains in that area were fully matched by those of medical students, and the gains of both law and medical students were comfortably exceeded by students pursuing graduate degrees in psychology.[124] Moreover, on initial pre-tests of conditional reasoning, law students in the longitudinal study scored no higher than other participating students, thereby foreclosing the possibility that the law students possessed stronger powers of conditional reasoning at the outset and thus were poised

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121. Lehman et al., *supra* note 97, at 441; *see also id.* ("The truth is that we know very little about reasoning and how to teach it. The one thing we thought we knew—namely, that formal discipline is an illusion—seems clearly wrong.").

122. *Id.* at 438-39; *see also* Nisbett et al., *supra* note 98, at 628 ("In our view, when people reason in accordance with the rules of formal logic, they normally do so by using pragmatic reasoning schemas that happen to map onto the solutions provided by logic.").

123. Lehman et al., *supra* note 97, at 440.

124. *Id.* at 438 fig.3. Lehman and Nisbett subsequently conducted a similar longitudinal study of undergraduates at the University of Michigan, following students in the social sciences, natural sciences, and humanities throughout their four years of study. Darrin R. Lehman & Richard E. Nisbett, *A Longitudinal Study of the Effects of Undergraduate Training on Reasoning*, 26 DEVELOPMENTAL PSYCHOL. 952, 954 (1990). With respect to conditional reasoning, they found that students in the natural sciences demonstrated approximately 65% improvement and that students in the humanities demonstrated approximately 60% improvement. *Id.* at 958 fig.3.

to make less dramatic improvements during the course of their studies.[125]

If we were to look only at the Michigan study, we might take comfort in the finding that there is a species of analytic skill in which law students show significant improvement, but we would have little basis for claiming that law schools and their famous case-dialogue method provide a uniquely powerful opportunity to develop those analytic capacities. Indeed, if the Michigan study were our only guide and analytic development were our only goal, we would be at least as likely to refer students to a graduate program in medicine as to a degree in law, and would be most likely to urge students to pursue a graduate degree in psychology.

C. *Testing Analytic Skills in Legal Settings*

In a small handful of studies, researchers have tried to determine whether third-year law students demonstrate an increased capacity to engage in the kinds of cognitive activities for which they are primarily trained: those falling under the umbrella of "legal analysis." The most noteworthy of those studies—and their discouraging results—are as follows.

1. *The Bryden Study*. In 1984, the University of Minnesota Law School's David Bryden published a provocative empirical piece in the *Journal of Legal Education*.[126] Bryden found inspiration for his study in the absence of any clear evidence to support the claim "that law professors teach students how to think like lawyers."[127] Bryden set out to determine whether law students improved their abilities to perform three different kinds of lawyerly thinking: engaging in functional analysis by trying to determine the meaning of a rule through reference to the rule's purpose; distinguishing between holdings and dicta in judicial rulings; and interpreting statutes.[128] Bryden wrote

125. *See* Lehman et al., *supra* note 97, at 437 (noting that the only area in which law students in the longitudinal study initially demonstrated a slight advantage was in the area of verbal reasoning).

126. David P. Bryden, *What Do Law Students Learn? A Pilot Study*, 34 J. LEGAL EDUC. 479, 479 (1984).

127. *See id.* at 479-80.

128. *See id.* at 481.

two different scenario-presenting examinations aimed at testing students' abilities in each of those three areas, and administered those examinations to third-year students and entering first-year students at what Bryden described as "three distinguished law schools"—two of which routinely appeared on top-twenty lists, and the third of which often came close.[129] With the aid of a research assistant, Bryden tabulated and evaluated the students' responses to the questions, fully acknowledging that "the grader has discretion in characterizing ambiguities, ipse dixits, and innuendoes."[130]

Bryden was distressed to find that although "[t]he seniors were nearly always more proficient than the entering freshmen"—an unsurprising result, given that the entering freshmen did not yet have even a semester of law school under their belts—"hardly anything was said by a majority even of the seniors."[131] He found that, in a discouraging number of instances, third-year students made fundamental analytic mistakes.[132] Bryden thus suggested that law schools might be over-emphasizing subject-matter coverage to the detriment of analytic training:

> [An] important question is whether the second and third years of legal education add anything to students' mental equipment besides substantive rules and policies. It would not be surprising, given the results of this study, to discover that most students have nearly as much analytical ability, even in construing statutes, at the end or even the middle of the first year as they do after three years. If so, we need to reconsider the purposes of upperclass pedagogy.[133]

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129. *Id.* at 481-83. Bryden ensured that the LSAT scores of the two different groups were comparable. *Id.* at 482. For extensive samples of the examination material, see *id.* at 485-99.

130. *Id.* at 485.

131. *Id.* at 500.

132. *See id.* at 502-03 (noting, for example, that many third-year students failed to spot issues or arguments that Bryden would have expected a well-trained student to identify with ease).

133. *Id.* at 501; *see also id.* at 505 ("My own conviction is that we have overstressed curricular reform while neglecting pedagogic reforms without which the curricular changes tend to be superficial."). For a critique of the Bryden study, see James F. Stratman, *The Emergence of Legal Composition as a*

2. *The Hofstra Study*. More than twenty years later, Stefan Krieger reached a similar conclusion in a small study at the Hofstra Law School.[134] Conceding at the outset that his methodology was relaxed in ways that other empiricists could find problematic,[135] Krieger explained that he had conducted an assessment of ten incoming first-year students, ten students midway through their second year, and ten third-year students nearing graduation.[136] Each student was presented with a written description of a hypothetical case involving the possibility of consumer fraud in the sale of a used car, then was asked to read the problem and voice his or her thoughts using a "think-aloud protocol," so that Krieger would have insight into the student's thought processes.[137] After the students had finished reading the materials, they were asked to recall and describe the case's relevant facts and to respond to prompts for legal analyses of various sorts.[138] Krieger found that although the second- and third-year students were better able than the entering first-year students to identify and recall the relevant facts, the third-year students' performance was no better than that of their second-year counterparts.[139] He further found that the third-year students did not do appreciably better in their analysis of

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Field of Inquiry: Evaluating the Prospects, 60 REV. EDUC. RES. 153, 166-71 (1990) (noting, for example, that Bryden assumed that if a given cognitive activity was not manifested in students' written work-product, then the students did not engage in it).

134. *See* Stefan H. Krieger, *The Development of Legal Reasoning Skills in Law Students: An Empirical Study*, 56 J. LEGAL EDUC. 332, 336, 353-54 (2006).

135. *Id.* at 333 (acknowledging that his study's sample size was small and drawn from a single law school, with no effort to control for differences in students' backgrounds or academic achievements).

136. *Id.* at 336.

137. *Id.* at 337-40.

138. *Id.* at 340-41 (explaining that he tracked such things as the participants' identification of possible applicable legal rules and their identification of relevant procedural concerns, such as the need for more information or additional legal research).

139. *Id.* at 343-45; *see also id.* at 345 ("These findings appear to raise some questions about the effectiveness of the final year-and-a-half of law school on students' ability to focus on the relevant facts in a legal problem.").

the case.[140] Krieger concluded that, "in most respects, the third-year subjects in this study showed only a slight change in reasoning strategy compared to second-year students."[141] Like Bryden before him, Krieger thus raised questions about the purposes being served by students' final semesters in law school.[142]

3. *The Evensen-LSAC Study*. The largest and most sophisticated study in this group was funded by the Law School Admission Council and published by the LSAC in 2009.[143] The study was carried out by Dorothy Evensen (an educational psychologist at Penn State University), James Stratman (a rhetorician at the University of Colorado at Denver), Laurel Oates (the director of the legal writing program at the Seattle University School of Law), and Sarah Zappe (an educational psychologist at Penn State University).[144] The study occurred in two phases.[145]

In 2003, the LSAC agreed to fund the research team's effort to create a prototype for a test instrument that would evaluate "law students' critical case reading and reasoning

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140. *Id.* at 349-52.

141. *Id.* at 352.

142. *Cf.* Brian Leiter, *A Potted History of American Legal Education and Scholarship in the 20th Century, with Special Reference to Why There Is No Longer a Scholarly Wissenschaft in Law*, BRIAN LEITER'S LAW SCHOOL REPORTS (July 11, 2012, 7:52 PM), http://leiterlawschool.typepad.com/leiter/2012/07/a-potted-history-of-american-legal-education-and-scholarship-in-the-20th-century-with-special-refere.html ("[T]he Langdellian legal *Wissenschaft* exhausts its intellectual utility within two years of JD study, and that is, as far as I can tell, no longer controversial on this side of the Atlantic.").

143. *See* DOROTHY H. EVENSEN ET AL., DEVELOPING AN ASSESSMENT OF FIRST-YEAR LAW STUDENTS' CRITICAL CASE READING AND REASONING ABILITY: PHASE 2,Law School Admission Council Grants Report 08-02 (2009), *available at* http://www.lsac.org/lsacresources/research/gr/pdf/gr-08-02.pdf.

144. *Id.*; *see also Dorothy Evensen*, PENN ST. C. EDUC., http://www.ed.psu.edu/educ/eps/higher-education/directory/dorothy-evensen (last visited Sept. 25, 2012); *James Stratman*, U. COLO. DENVER C. LIBERAL ARTS & SCI., http://www.ucdenver.edu/academics/colleges/CLAS/Departments/communication/AboutUs/ContactUs/DepartmentDirectory/Pages/JamesStratman.aspx (last visited Sept. 25, 2012); *Laurel Currie Oates*, SEATTLE U. SCH. L., http://www.law.seattleu.edu/Faculty/Faculty_Profiles/Laurel_Currie_Oates.xml (last visited Sept. 25, 2012).

145. EVENSEN ET AL., *supra* note 143, at 1.

skills."[146] Based upon a review of prior studies in both law and non-law settings, the team identified five assumptions to guide their efforts: (1) the test should measure students' ability to read and analyze a case in service to a specific purpose (just as an attorney reads a case with his or her client's specific objectives in mind); (2) the test should measure students' ability "to generate and distinguish more from less purpose-relevant questions to ask" when reading a case; (3) the test should measure students' ability to identify purpose-relevant indeterminacies in a case; (4) the test should measure students' ability to raise additional purpose-relevant questions after identifying purpose-relevant indeterminacies in a case; and (5) with respect to each of those four dimensions of analytic skill, the test should measure students' abilities not only when confronting an individual case, but when grappling with a series of related cases, as well.[147]

With the help of a panel of legal experts, the team developed a test involving three short judicial rulings concerning a Pennsylvania rule that governs appeals from arbitration.[148] They administered the test to 161 volunteering first-year students at five different (undisclosed) law schools—80 of those students were in their first semester of law school and 81 were in their second.[149] The researchers instructed the participants to

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146. *Id.* at 1. Applications of such a prototype could be used to measure students' progress during their law school careers. *See id.* The LSAC and the research team also hoped to come to a deeper theoretical understanding of "the information-processing constructs comprising case reading and reasoning skills." *Id.*

147. *See id.* at 2-4 (emphasis omitted).

148. *See id.* app. at 44-49 (reproducing the three cases). One member of the research team had previously used those three cases in a different study. *See* James F. Stratman, *When Law Students Read Cases: Exploring Relations Between Professional Legal Reasoning Roles and Problem Detection*, 34 DISCOURSE PROCESSES 57, 69-71 (2002).

149. *See* EVENSEN ET AL., *supra* note 138, at 4-6. The identity of the law schools remains confidential. In an e-mail exchange, Professor Evensen told me that one of the schools is widely regarded as a "national draw" (in the top 50 in *U.S. News*'s rankings), two are "regional draws" (in the top 100 in *U.S. News*'s rankings) and two are "local draws" (below the top 100 in *U.S. News*'s rankings). Their LSAT ranges for admitted students (25th and 75th percentile respectively), were as follows: 158 and 165 for the national school, 155 and 161

read the three cases as if they were being asked to prepare an appeal on behalf of a client whose situation the researchers described.[150] The team then presented the students with fourteen multiple-choice questions aimed at evaluating their analytic abilities in the five dimensions that the team had targeted.[151]

They found that the second-semester students performed no better than the first-semester students; indeed, the second-semester students scored marginally worse.[152] Students in both groups struggled the most when questions required them to identify strategically useful questions arising from the cases' indeterminacies.[153] The research team noted, however, that the study was cross-sectional in nature, and that it thus was possible that the second-semester students who volunteered for the study were simply less proficient than their first-semester counterparts.[154] Might many of those individual students show increased ability if tested later in their law school careers?

For the study's second phase, the research team thus set out to determine the degree to which students' case reading and reasoning abilities improved between their first and second years in law school and between their first and third years in law school.[155] They constructed a second version of the test, again using three short judicial rulings "that presented the kind of indeterminacies of interpretation that legal educators have complained students are poor at analyzing or even recognizing."[156] They settled on three cases involving allegations by employees that their employers had violated the Employee Retirement Income Security Act.[157] With the help of eight law

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for the two regional schools, and 153 and 160 for the two local schools. E-mail from Dorothy Evensen to Todd Pettys (July 8, 2012) (on file with author).

150. *See* EVENSEN ET AL., *supra* note 138, at 4.

151. *Id.* at 5; *see also id.* app. at 50-58 (reproducing the fourteen questions).

152. *Id.* at 7 tbl.2.

153. *Id.* at 7-9.

154. *Id.* at 9.

155. *Id.* at 14.

156. *Id.* at 10.

157. *Id.*; *see also id.* app. at 59-67 (reproducing the three cases).

professors, they created an examination consisting of fourteen multiple-choice questions.[158] Returning to the same five law schools, the team administered the new version of the test to 63 students who—now in their final semester of law school—had taken the first version of the test back when they were first-year students.[159] Using both versions of the test, they also launched a new longitudinal study involving 83 students who agreed to take one version of the test in the spring of their first year and the other version of the test in the fall of their second year.[160]

With respect to the new longitudinal study—measuring analytic progress between the second and third semesters of law school—the research team found that the students manifested no improvement whatsoever.[161] With respect to the longer-term study—retesting original study subjects in their final semester of law school—the team again found no improvement, even after statistically taking into account the possibility that the second version of the test might have been somewhat more difficult.[162] While cautioning against drawing sweeping inferences from these disappointing results,[163] the team concluded that there is good reason to be concerned about the lack of growth in students' case-reading and reasoning abilities during their time in law school.[164]

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158. *Id.* at 13.

159. *Id.* at 14.

160. *Id.*

161. *See id.* at 15 tbl.8.

162. *Id.* at 16.

163. *Id.* (stating that "our [two tests] are very much under development and require additional scrutiny").

164. *See id.* at 39 (stating that "we believe we established that our test[s are] measuring something important to the literacy and professional development of law students"). They suggested that perhaps they simply were testing for growth in skills that are "not stressed or practiced extensively in law schools," particularly in the area of identifying legal indeterminacies that are relevant to one's litigation purposes. *Id.* Inspired by the LSAC study, David Herring and Collin Lynch subsequently conducted a small, one-semester study at the University of Pittsburgh, seeking to measure the extent to which students' case-reading and reasoning abilities improved after studying the topic of personal jurisdiction through the case-dialogue method. David J. Herring & Collin Lynch, *Teaching Skills of Legal Analysis: Does the Emperor Have Any Clothes?* 18-19 (Univ. of Pittsburgh Legal Studies Research Paper Series Working Paper No.

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If the results of all these studies pointed in opposing directions or sharply conflicted with one's own intuitions about most students' analytic development, one might quickly dismiss them, confident that a panel of empiricists could suggest reasons to resist their results. Although other doctrinal faculty might be persuaded to the contrary, my own conviction is that we are not doing as much as we could to help all of our students increase their analytic abilities in ways that transcend the particular doctrinal frameworks we teach. Hoping to be joined by others who are willing to entertain that possibility, I proceed to consider what we might do about that problem, and how we might lay the foundation for a renaissance in legal education in the process.

III. THE INCIPIENT REVOLUTION

In an April 2012 *New Yorker* profile, John Hennessy—president of Stanford University and member of the boards of directors for Google and Cisco Systems—predicted that Web-based technologies soon will substantially disrupt mainstream higher education, just as such technologies have brought tremendous change to the music and publishing industries.[165] He does not know precisely what form those disruptions will take, but his prediction of impending change is unwavering: "'There's a tsunami coming.'"[166] Other prominent educators are making the same forecast. Lawrence Bacow, a former president of Tufts University,[167] and William Bowen, a former president of Princeton University and of the Andrew W. Mellon

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2011-16, 2011), *available at* http://papers.ssrn.com/abstract=1856109. They found only minor improvement. *See id.* at 28, 35.

165. *See* Ken Auletta, *Get Rich U.*, NEW YORKER, Apr. 30, 2012, at 40, 46.

166. *Id.* at 47. Hennessy's prediction of a "tsunami" might ring a bell for some readers who did not read the profile: when listing the reasons for her widely disparaged effort to oust President Teresa Sullivan, University of Virginia Rector Helen Dragas prominently cited Hennessy's prediction and her frustration that President Sullivan had not been pushing UVA more aggressively into the world of online education.

167. *President Emeritus Lawrence S. Bacow*, TUFTS U., http://president.tufts.edu/bacow/ (last visited Sept. 25, 2012).

Foundation,[168] are convinced that "online educational technology will bring about fundamental reform in how teachers teach and students learn in the years to come."[169] Clayton Christensen—a member of the Harvard Business School faculty and an influential scholar on the subject of disruptive innovation[170]—argues that competition from online enterprises "will require traditional universities to change fundamentally."[171]

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168. *William G. Bowen*, ANDREW W. MELLON FOUNDATION, http://www.mellon.org/about_foundation/staff/office-of-the-president/williambowen (last visited Sept. 25, 2012).

169. Lawrence S. Bacow et al., *Barriers to Adoption of Online Learning Systems in U.S. Higher Education,* ITHAKA S+R 6 (May 1, 2012), http://www.sr.ithaka.org/research-publications/barriers-adoption-online-learning-systems-us-higher-education. Bacow elaborates:

> The technology is evolving very quickly. I would not assume that what is available today is what they will be working with in five (or even three) years. . . . Those presidents, provosts, and deans that are willing to rethink the traditional lecture-recitation mode of instruction to incorporate these new technologies are likely to open up far more possibilities than those that merely try to plug the technology into their existing curricula. . . . Today's students have only known a digital world. In time these students will become tomorrow's faculty. Thus I believe change is inevitable. Teaching in the future will involve far more online instruction than it does today. The only question is how long will this change take.

Matthew P. Long, *Five Questions for Lawrence Bacow*, S+R BLOG (May 14, 2012), http://www.sr.ithaka.org/blog-individual/five-questions-lawrence-bacow.

170. *See* CLAYTON M. CHRISTENSEN, THE INNOVATOR'S DILEMMA: WHEN NEW TECHNOLOGIES CAUSE GREAT FIRMS TO FAIL ix, xvii-xviii, 253 (1997).

171. CLAYTON M. CHRISTENSEN & HENRY J. EYRING, THE INNOVATIVE UNIVERSITY: CHANGING THE DNA OF HIGHER EDUCATION FROM THE INSIDE OUT 218 (2011). Ten to fifteen years ago, some were making similar predictions concerning law schools in particular. *See* Stephen M. Johnson, *Legal Education in the Digital Age*, 2000 WIS. L. REV. 85, 85 (quoting, without the author's own endorsement, an individual who predicted at the January 1999 Association of American Law Schools conference that "'[m]ost law schools, as we know them, will disappear, in recognizable form, somewhere in the next five to ten years'"). Others made bold predictions without the timeframes. *See, e.g.*, Mary C. Daly, *The Structure of Legal Education and the Legal Profession, Multidisciplinary Practice, Competition, and Globalization*, 52 J. LEGAL EDUC. 480, 480 (2002) ("The steady expansion of online education poses a threat to the economic viability of local law schools and some regional law schools."); Robert E. Oliphant, *Will Internet Driven Concord University Law School Revolutionize Traditional Law School Teaching?*, 27 WM. MITCHELL L. REV. 841, 877-79 (2000)

Their certainty of significant change is driven by a number of developments that have occurred over the past ten to fifteen years. Those developments help set the context—both technological and pedagogical—for my own argument in favor of using Web-based technologies to restructure the way we in legal education teach doctrinal courses.

A. *Prestigious Universities' Push for Web-Based Innovation*

At about the turn of the millennium, leaders at several prestigious universities entered a new period of experimentation with online technologies, convinced that the Internet could be brought to bear in transformative ways at the highest levels of American education, and hoping to position their own institutions at the forefront of whatever transformations might occur.[172] Initially, their focus was on generating new revenue streams. In 2000, for example, Columbia University launched an enterprise called Fathom, believing that, by selling online courses to the larger public, professors' teaching could be profitably monetized beyond the campus's borders in much the same way as patents and scientific discoveries.[173] Public interest and revenues fell far short of expectations, however, and Lee Bollinger terminated the program in 2003 soon after assuming Columbia's presidency.[174] The year 2000 also marked the launch of AllLearn, an effort by Oxford, Princeton, Stanford, and Yale universities to sell online courses to the public.[175] The four universities hoped to mark

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(concluding that the answer to the question posed by the article's title is likely affirmative); Nicolas P. Terry, *Bricks Plus Bytes: How "Click-and-Brick" Will Define Legal Education Space*, 46 VILL. L. REV. 95, 139 (2001) (predicting that competition from Concord and other online law schools will drive other law schools toward a "click-and-brick model").

172. Until the retirement of Professor Peter Martin, the initiative's chief proponent, for example, the Cornell University Law School made available audio online courses in Copyrights and Social Security Law to tuition-paying students at other law schools. *See* Peter W. Martin, *Cornell's Experience Running Online, Inter-School Law Courses—An FAQ*, 32 LAW TCHR. 70, 72-73 (2005).

173. *See* TAYLOR WALSH, UNLOCKING THE GATES: HOW AND WHY LEADING UNIVERSITIES ARE OPENING UP ACCESS TO THEIR COURSES 24, 28 (2011).

174. *See id.* at 33, 41.

175. *See id.* at 42.

themselves as leaders in the Internet era and to generate a body of data with which to research the technological and human dynamics of online education.[176] Princeton withdrew from the coalition in 2001 with its provost calling AllLearn "dot-com madness," and the remaining universities ended the program in 2006 due to high costs and a miniscule public response.[177]

From those failed initiatives, many university leaders drew the conclusion that people typically are not willing to pay for online courses that neither carry academic credit nor lead to a formal degree.[178] Focus then shifted to ways in which universities might make educational content available to the public free of charge. One such initiative had begun almost inadvertently at the University of California-Berkeley in the late 1990s, when Professor Lawrence Rowe led an effort to provide Berkeley students with online recordings of numerous Berkeley classes, and decided that it would be easiest to do so in a way that would allow others to have online access to those recordings, as well.[179] (Today, hundreds of Berkeley recordings are available to the public on YouTube and iTunes, and have been viewed or downloaded more than twenty million times.[180]) In 2001, the Massachusetts Institute of Technology launched OpenCourseWare, a project that today provides online access to syllabi, lecture notes, reading lists, and assignments for more than 2,000 MIT courses, and makes available audio or video recordings of numerous MIT class sessions, as well.[181] In 2007, Yale University launched

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176. *See id.* at 42-45 (emphasizing that the universities were less interested than Columbia University had been in making a profit, and were more interested in conducting research and obtaining an early stake in the world of online education). *See* Scott Carlson, *Alliance Backed by Oxford, Stanford, and Yale Offers Courses to the Public*, CHRON. HIGHER EDUC., Sept. 6, 2002, at A47 (providing an interim assessment of the organization's finances and activities, and closing with skepticism about the venture's likelihood of success).

177. *See* WALSH, *supra* note 164, at 50.

178. *See id.* at 56; *see also* William G. Bowen, *Foreword* to *id.* at viii (drawing from Fathom and AllLearn the "major lesson" that online education does not provide new revenue streams that universities can readily tap).

179. *See* WALSH, *supra* note 164, at 150-53.

180. *See id.* at 150, 161, 168.

181. *See id.* at 57, 62, 67. A 2009 study found that the OpenCourseWare website averaged one million visits per month, including visits from other

Open Yale Courses, through which the university today provides the world with free, professionally produced, online videos of more than forty complete Yale courses, ranging from Modern Poetry to Game Theory to Death.[182]

The videos that Berkeley, MIT, and Yale provide generally consist of recordings of professors in their classrooms; the material is not specially arranged with the online student in mind, nor is the online student given an opportunity to interact with the professor or to assess what he or she has learned through papers, quizzes, or exams. Indeed, online viewers are not actually "students" in those courses except to the extent they choose to see themselves in that way. The recordings simply provide online viewers with an opportunity to observe enrolled students' classroom experiences, and to learn something vicariously along the way.

A new wave of initiatives—dubbed "MOOCs," for "massively open online courses"—are aimed at providing online viewers with an educational experience designed with online students specifically in mind, providing quizzes and other assessments to help them monitor their own learning progress.[183] Stanford University helped lead the way on this front,[184] offering three of its computer-science

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educators looking for course-development ideas, from members of the public seeking to lay out a plan for self-education, and from college and university students at MIT and elsewhere eager to learn about specific MIT courses. *See id.* at 74, 81.

182. *See* WALSH, *supra* note 164, at 122 (discussing the program's launch); Courses, OPEN YALE COURSES, http://oyc.yale.edu/courses (last visited July 12, 2012) (listing the currently available courses); *see also* Andy Guess, *Open Courses Open Wider*, INSIDE HIGHER EDUC. (Dec. 12, 2007, 4:00 AM), http://www.insidehighered.com/news/2007/12/12/openyale (reporting contemporaneously on the initiative's launch). Viewing some of Yale's recordings has been among the many pleasures of writing this Article; they are exceptionally well produced.

183. *See* Tamar Lewin, *Harvard and M.I.T. Join to Offer Web Courses*, N.Y. TIMES, May 3, 2012, at A18

184. Stanford has been the most influential leader, but was not the first on the scene. In 2002, with funding from the Hewlett Foundation, Carnegie Mellon University began its Open Learning Initiative, a continuing effort to develop free online courses in which a computer uses a student's performance on quizzes to continually adapt the student's curriculum to his or her own strengths and weaknesses. *See* WALSH, *supra* note 164, at 89-96. Progress has been slow due in part to the high costs of producing each course; initially, each course cost

courses online, free of charge, in the fall of 2011.[185] The courses consisted of videos that students could watch at their own pace, with quizzes and feedback interspersed throughout.[186] One of those courses—Artificial Intelligence, taught by Sebastian Thrun, then a tenured member of the Stanford faculty, and Peter Norvig, Google's director of research—drew 160,000 students from 190 countries, with more than 20,000 of those students sticking with it at least long enough to take the midterm.[187] Thrun and Norvig have subsequently joined with others to create Udacity (drawing its name from a combination of "university" and "audacity"), a venture that hires professors to teach free online courses on scientific or quantitative subjects like computer science, physics, and statistics.[188]

Racing to keep pace with Stanford, officials at the Massachusetts Institute of Technology announced in December 2011 that they were creating a venture called MITx to offer free online versions of several courses to the

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approximately $1 million to produce, though that cost has since dropped by about half. *See id.* at 101. Today, about a dozen courses are available online free of charge. *See* See Our Open + Free Courses, OPEN LEARNING INITIATIVE, CARNEGIE MELLON UNIVERSITY, http://oli.cmu.edu/learn-with-oli/see-our-free-open-courses/ (last visited July 12, 2012). Those courses focus on subjects—such as languages and science—in which questions have "a single correct answer," and thus do not include courses from the humanities. WALSH, *supra* note 164, at 97-98. Although Carnegie's efforts have won a measure of national attention, those efforts have not transformed the way that Carnegie faculty and students interact with one another; indeed, many faculty and students on the Carnegie campus know little or nothing about the Open Learning Initiative. *See* WALSH, *supra* note 164, at 108. Stanford's efforts have already proven to be far more transformative. *See* Richard Perez-Pena, *Top Universities Test the Online Appeal of Free*, N.Y. TIMES, July 18, 2012, at A15. (stating that Carnegie Mellon's Open Learning Initiative has been around for a decade, "[b]ut for many educators, Stanford fired the starting gun last fall").

185. *See* Jamie Beckett, *Free Computer Science Courses, New Teaching Technology Reinvent Online Education*, STANFORD REPORT (Aug. 16, 2011), http://news.stanford.edu/news/2011/august/online-computer-science-081611.html.

186. *See id.*

187. *See* Steven Leckart, *The Stanford Education*, WIRED, Apr. 2012, at 68, 70, 72-73.

188. *See id.* at 73-74; *see also About Udacity Courses*, UDACITY, http://www.udacity.com/courses (last visited July 13, 2012) (listing Udacity's current courses).

public.[189] MIT explained that its own students would use the courses as a learning supplement, and that its researchers would use the courses to learn more about online teaching, online learning, and computer grading.[190] The first MITx course—Circuits and Electronics, which went online in March 2012—attracted 120,000 students, of whom 10,000 remained long enough to take the midterm.[191] Later that spring, MIT and Harvard University announced that they were contributing $30 million each to create a nonprofit venture called edX—a vehicle for both universities to offer the public free online courses from the sciences and humanities.[192] In July 2012, the University of California-Berkeley announced that it was joining edX and that other institutions were slated soon to follow.[193] Harvard University Provost Alan Garber is among those who see edX as an opportunity to conduct further research on online teaching technologies, explaining that what universities are doing in the online world a few years down the road will likely look very different from what they are doing today.[194]

Several new companies are working with universities to develop and market their online courses. When the Washington University School of Law announced in May 2012 that it will join the New York University School of Law and other institutions that offer wholly online LL.M. programs, for example, it said that it would be aided in that undertaking by 2tor, an educational technology company.[195]

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189. *See* Tamar Lewin, *M.I.T. Plans to Expand Its Free Online Courses*, N.Y. TIMES, Dec. 19, 2011, at A22.

190. *See id.*

191. *See* Lewin, *supra* note 183

192. *See id.*; *see also About edX*, EDX, https://www.edx.org/about (last visited June 28, 2012) (providing information about the initiative); Tamar Lewin, *One Course, 150,000 Students*, N.Y. TIMES, July 22, 2012, at ED33 (presenting a short interview with M.I.T. Professor Anant Agarwal, the president of edX).

193. *See* Tamar Lewin, *Berkeley to Join the Free Online Learning Partnership EdX*, N.Y. TIMES, July 24, 2012, at A3.

194. *See* Lewin, *supra* note 181.

195. *See* Tamar Lewin, *Law School Plans to Offer Web Courses for Master's*, N.Y. TIMES, May 9, 2012, at A11. For information about NYU's online LL.M. program, see *Executive LL.M. in Tax*, NYU LAW, http://www.law.nyu.edu/llmjsd/executivellmtax/index.htm (last visited July 13, 2012). Washington University plans to charge its online students the same rate of tuition that it charges its in-residence students—currently about $50,000 per

EmbanetCompass claims similar partnerships with the University of Southern California, Vanderbilt University, Wake Forest University, Boston University, Brandeis University, Pepperdine University, George Washington University, Howard University, and Case Western Reserve University, among others.[196] Kaplan Global Solutions reports that it has entered into arrangements with George Washington University, Texas A&M, and George Mason University, among others.[197]

Of course, many of these universities' online courses may lack some of the advantages that traditionally have helped draw students to American campuses. The instructor of a heavily enrolled online course, for example, cannot readily observe and intuit the needs of his or her students, develop the mentoring relationships that faculty and students alike often find so rewarding, or personally answer each and every student question.[198] But few would argue that those sorts of benefits alone justify the high rates of tuition that students commonly pay for the privilege of studying with faculty members face-to-face. Moreover, some of the disadvantages of online courses will be at least partially counterbalanced by those courses' advantages. Online students, for example, can study at their own pace, easily review material about which they are confused, receive frequent electronic feedback on their progress, interact in online forums with students far more diverse than those commonly found in college classrooms, and gain exposure to faculty and information they might not otherwise be able to afford.[199] That last advantage is especially powerful. If for little or no charge students could go online and take a course from one of the nation's leading

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year—with 2tor providing marketing and technical support. *See* Lewin, *supra*, at A11; *see also About*, 2TOR, http://2tor.com/about/ (last visited July 13, 2012) (describing the company's objectives and services).

196. *See Our Academic Partners*, EMBANETCOMPASS, http://embanetcompass.com/our-partners/our-academic-partners (last visited July 13, 2012).

197. *See Our Partners*, COLLOQUY, http://www.kaplanglobalsolutions.com/index.php/our-partners (last visited July 13, 2012).

198. *See* Mark Edmundson, *The Trouble with Online Education*, N.Y. TIMES, July 20, 2012, at A23 (underscoring this observation).

199. *See* Lewin, *supra* note 183.

professors at one of the nation's leading universities, then why should they pay remarkably high rates of tuition to take that same course in person from the same or a different professor?

The number of university leaders and faculty members who will have to confront that question is poised to skyrocket in the years ahead, as many of the nation's most respected institutions of higher education develop platforms for conveying to the public—for little or no charge—a great deal of the information that students historically have paid tens of thousands of dollars to obtain. There is no reason to believe, by the way, that the information traditionally conveyed in law schools' doctrinal classrooms will remain exempt from that revolution. Like their counterparts in other disciplines, many law professors may covet the opportunity to teach thousands of students around the world through creative uses of Web-based technologies.

B. *The Flipped Classroom*

The initiatives I have described thus far all demand especially strong institutional support, with costs often running well into the millions of dollars. What I am proposing for our doctrinal courses requires only a fraction of that investment, and—so long as one has a technical-support specialist nearby to answer initial questions—can be implemented by individual faculty members working almost entirely on their own. Indeed, it was an individual faculty member at Stanford University, acting on her own initiative, who helped devise the framework.[200]

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200. In the following paragraphs, I do not mean to suggest that Professor Koller was the first to combine online and face-to-face components in a single course. She was not. *See* I. ELAINE ALLEN ET AL., THE SLOAN CONSORTIUM, BLENDING IN: THE EXTENT AND PROMISE OF BLENDED EDUCATION IN THE UNITED STATES 5-8 (2007), *available at* http://sloanconsortium.org/publications/survey/pdf/Blending_In.pdf (reporting that a large number of colleges and universities offered one or more courses in which between 30% and 79% of the material was delivered online and the rest delivered in the classroom). As I will explain, however, Koller was the first (to my knowledge) to popularize the idea of eliminating lectures from her classroom meetings and delivering the necessary information beforehand with a combination of online videos and quizzes. In any event, much of my own thinking was sparked by news of her work, rather than by news of what other professors previously had done. *See infra* notes 190-93 and accompanying text.

In January 2010, Daphne Koller—a member of Stanford's computer-science faculty—decided to confront a student-attendance problem in one of her courses. The course had previously been recorded, and was repeatedly televised as part of Stanford's continuing-education program.[201] She found that, when teaching that course, student attendance would drop off precipitously once students figured out they could hear substantially the same lectures without having to appear in the classroom at the scheduled times.[202] Drawing some of her inspiration from the Khan Academy,[203] Koller decided (as she puts it) to "flip" her classes by preparing a series of online videos and online quizzes for her students—thereby conveying the information that she previously had taught in conventional lectures—and by using the newly available classroom time to interact more directly with her students by presenting them with interactive problem-solving activities, reviewing material they were finding especially difficult, and the like.[204] In a December 2011 *New York Times* column titled *Death Knell for the Lecture*, Koller explained her philosophy:

> Some argue that online education can't teach creative problem-solving and critical-thinking skills. But to practice problem-

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201. *See* Nick DeSantis, *Online-Education Start-Up Teams with Top-Ranked Universities to Offer Free Courses*, *Wired Campus*, CHRON. HIGHER EDUC. (Apr. 18, 2012, 5:01 AM), http://chronicle.com/blogs/wiredcampus/online-education-start-up-teams-with-top-ranked-universities-to-offer-free-courses/36048.

202. *See* DeSantis, *supra* note 190.

203. *See* John Markoff, *Online Education Venture Lures Cash Infusion and Deals with 5 Top Universities*, N.Y. TIMES, Apr. 18, 2012, at B4 (citing Koller for the proposition that the Khan Academy "pioneered" the idea of the flipped classroom). Salman Khan, a hedge-fund manager, founded the Khan Academy after he posted videos on YouTube aimed at helping his cousin with her math homework, then discovered that his videos were attracting an enormous number of viewers. *See* Laura McKenna, *The Big Idea that Can Revolutionize Higher Education: 'MOOC'*, ATLANTIC (May 11, 2012, 10:50 AM), http://www.theatlantic.com/business/archive/2012/05/the-big-idea-that-can-revolutionize-higher-education-mooc/256926/. Today, with support from Google and from the Bill and Melinda Gates Foundation, the Khan Academy provides more than 3000 online videos on a wide range of subjects. *See id.* Sebastian Thrun drew some of his inspiration from the Khan Academy, as well. *See* Leckart, *supra* note 177 (describing Thrun's attendance at a March 2011 lecture by Khan).

204. *See* DeSantis, *supra* note 190.

> solving, a student must first master certain concepts. By providing a cost-effective solution for this first step, we can focus precious classroom time on more interactive problem-solving activities that achieve deeper understanding—and foster creativity. In this format, which we call the flipped classroom, teachers have to interact with students, motivate them and challenge them.[205]

Joined by her Stanford colleague Andrew Ng, Koller has founded a for-profit company called Coursera, built in part on the flipped-course philosophy.[206] Buoyed by the receipt of $16 million in venture capital in April 2012, Coursera initially entered into partnerships with Princeton University, the University of Michigan, the University of Pennsylvania, and Stanford University.[207] By July 2012, they had added several more major institutions to the list, including the California Institute of Technology, Duke University, Johns Hopkins University, the University of Virginia, and the University of Washington, among others.[208] Faculty members from the participating schools are helping Coursera develop online courses from across the curriculum.[209] For online students not enrolled at those institutions, the courses will offer opportunities for self-paced instruction. For students in residence, however, the hope is that the educational experience will be far more powerful. A number of faculty members intend to use their online Coursera materials to replace their classroom

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205. Daphne Koller, *Death Knell for the Lecture: Technology as a Passport to Personalized Education*, N.Y. TIMES, Dec. 6, 2011, at D8.

206. *See* Markoff, *supra* note 203.

207. *See* Rip Empson, *Online Education Startup Coursera Lands $16M from Kleiner & NEA, Adds John Doerr to Its Board*, TECHCRUNCH (Apr. 18, 2012), http://techcrunch.com/2012/04/18/coursera-raises-16m/; DeSantis, *supra* note 190.

208. *See* Tamar Lewin, *Universities Reshaping Education on the Web*, N.Y. TIMES, July 17, 2012, at A12.

209. *See Courses*, COURSERA, https://www.coursera.org/#courses (last visited July 9, 2012) (listing numerous courses in subjects ranging from computer science to history). For courses in the humanities—where testing is made more difficult by virtue of the frequent absence of right and wrong answers—Coursera plans to experiment with peer assessments and crowdsourcing as vehicles for providing individual students with valuable feedback. *See Pedagogy*, COURSERA, https://www.coursera.org/#about/pedagogy (last visited July 13, 2012).

lectures, thereby freeing up the classroom for more pedagogically powerful activities.[210]

Koller predicts that the increasing availability of well-taught free or low-cost online courses will push universities "to change, because they will not be able to charge students for content any longer."[211] Prominent voices in the mainstream media are making the same prediction. In May 2012, for example, David Brooks wrote in the *New York Times* that "[o]nline education could potentially push colleges up the value chain—away from information transmission and up to higher things."[212] Writing in the same forum soon thereafter, Thomas Friedman praised Coursera's model: "Welcome to the college education revolution. Big breakthroughs happen when what is suddenly possible meets what is desperately necessary."[213] At bottom, Koller and her colleagues see their enterprise as a tactical response to the "tsunami" in higher education that Stanford President John Hennessy and others have predicted.[214] "'You can be crushed or you can surf," Koller says, "and it is better to surf.'"[215]

C. *Empirical Effectiveness*

Of course, one would not want to make online content an integral part of one's teaching unless there were good reasons to believe that the Internet provides an effective vehicle for conveying propositional information. The empirical data on that point are promising.

In September 2010, the United States Department of Education released a major report on the comparative effectiveness of online and face-to-face teaching.[216] The

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210. *See* DeSantis, *supra* note 190; *Pedagogy*, *supra* note 197.

211. McKenna, *supra* note 192 (referencing Koller).

212. David Brooks, Op-Ed., *The Campus Tsunami*, N.Y. TIMES (May 4, 2012), at A29.

213. Thomas L. Friedman, Op-ed., *Come the Revolution*, N.Y. TIMES, May 16, 2012, at A25.

214. *See* *supra* note 159 and accompanying text (quoting Hennessy).

215. McKenna, *supra* note 192 (quoting Koller).

216. *See* BARBARA MEANS ET AL., U.S. DEP'T OF EDUC., EVALUATION OF EVIDENCE-BASED PRACTICES IN ONLINE LEARNING: A META-ANALYSIS AND REVIEW

report's authors, led by educational psychologist Barbara Means,[217] conducted a comprehensive examination of the research literature from 1996 through July 2008, reviewing all published empirical work comparing online and face-to-face education.[218] In keeping with their commission from the Department of Education, their primary objective had been to provide "research-based guidance about how to implement online learning for K-12 education and teacher preparation," but they discovered—usefully for our purposes here—that most of the extant research focused on adult learners in higher education and other settings.[219]

Based on their analysis of dozens of empirical studies, the research team concluded that purely online instruction tends to be "as effective as classroom instruction but no better."[220] That result is significant, but not surprising; there is little reason to suppose that substantially the same

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OF ONLINE LEARNING STUDIES xi-xii (2010), *available at* http://www2.ed.gov/rschstat/eval/tech/evidence-based-practices/finalreport.pdf.

217. Means is the director of SRI International's Center for Technology in Learning. *See Lab + Center Directors*, SRI INTERNATIONAL, http://sri.com/about/people/lab-center-directors (last visited July 1, 2012). SRI International describes itself as "an independent, nonprofit research institute conducting client-sponsored research and development for government agencies, commercial businesses, foundations, and other organizations." *About Us*, SRI INTERNATIONAL, http://sri.com/about (last visited July 1, 2012).

218. *See* MEANS ET AL., *supra* note 204, at ix.

219. *Id.* at xi-xii; *see also id.* at 13 (stating that the research team zeroed in on ninety-nine empirical studies in particular, only nine of which involved students in K-12 schools); *id.* at 17 (explaining that approximately half of the targeted ninety-nine studies involved students enrolled in programs for academic credit).

220. *Id.* at 18; *see also id.* at xv (stating that "the learning outcomes for students in purely online conditions and those for students in purely face-to-face conditions were statistically equivalent"); Francine S. Glazer, *Introduction*, *in* BLENDED LEARNING: ACROSS THE DISCIPLINES, ACROSS THE ACADEMY 2 (Francine S. Glazer ed., 2012) ("A large body of literature, often categorized as the *no significant difference* literature, is often cited in support of the contention that there is no discernible benefit in the learning outcomes of students taught online compared to students taught in a face-to-face environment."). For the comparable reflections of a Yale University librarian who has frequently taught online courses for library schools, see Todd Gilman, *Combating Myths About Distance Education*, CHRON. OF HIGHER ED., Feb. 26, 2010, at A41.

instruction delivered online and delivered face-to-face would consistently yield different learning outcomes.[221]

The research team's findings were more dramatic when they examined studies comparing a *blend* of online and face-to-face instruction with purely face-to-face teaching: those studies indicated an average of 35 percent stronger learning outcomes for students taught in a blended format.[222] Means and her co-authors stressed that there is nothing about a blend of online and face-to-face instruction, *per se*, that should improve student learning.[223] Rather, the significantly improved outcomes for students taught in blended settings may flow simply from the fact that those students are exposed to more instructional time and to a greater variety of instructional materials than students whose primary instructional encounters take place in the classroom.[224]

How, then, might law schools bring blended learning to their doctrinal courses, weaving together the best uses of online and face-to-face instruction?

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221. *Cf.* MEANS ET AL., *supra* note 204, at 40 ("The fact that the majority of studies found no significant difference across media types is consistent with the theoretical position that the medium is simply a carrier of content and is unlikely to affect learning per se.").

222. *See id.* at xv, 19.

223. See *id.* at xv.

224. *See id.* They returned to that point in the report's closing pages:

> Studies using blended learning . . . tend to involve more learning time, additional instructional resources, and course elements that encourage interaction among learners. This confounding leaves open the possibility that one or all of these other practice variables, rather than the blending of online and offline media per se, accounts for the particularly positive outcomes for blended learning in the studies included in the meta-analysis.

Id. at 52. In one study, for example, researchers found that English-as-a-foreign-language students performed much better when their classroom instruction was supplemented by online activities and exercises. *See* Reima S. Al-Jarf, *The Effects of Web-Based Learning on Struggling EFL College Writers*, 37 FOREIGN LANGUAGE ANNALS 49, 50-55 (2004). It is difficult to discern whether those online activities and exercises made the crucial difference, or whether the study's results turned simply on the fact that students in the blended environment received greater amounts of instructional time. *See id.*

D. *Law Schools' Doctrinal Courses*

Ever since the Langdellian revolution of the late nineteenth century, subject-matter coverage and cognitive development have battled for primacy in law school classrooms.[225] We have purported to achieve both objectives simultaneously through the pedagogical techniques we employ, particularly through our practice of questioning students about appellate rulings.[226] The historical and empirical records suggest, however, that those objectives often sit in strong tension with one another, and that faculty and students alike commonly make choices that prioritize doctrinal coverage over analytic development.[227]

The key to changing that stubborn dynamic lies in loosening the Langdellian link between teaching students doctrine and developing students' minds.[228] By using Web-

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225. *See supra* Part I.A.

226. *See supra* Part I.

227. *See supra* Parts I and II.

228. Having opened this Article with a ruefully fatalistic epigraph from Llewellyn, it bears noting that Llewellyn later insisted upon pedagogical reform, and that the direction in which he pointed involved loosening the Langdellian link as I have described it here. In 1948, Llewellyn noted the pedagogical problems created by

> the hugely growing quantity of information about subject matter which is needed for competence in the discipline. The pressure to expand the amount of "just plain law" "covered in class" has of course greatly increased the tendency in case teaching to concentrate upon subject matter at the expense of training in craft-skills. Nor could anything be a less happy development.
>
> For information, as such, can be packed into books. Its acquisition can be guided by syllabus and lecture. That is what books, syllabus, and lecture are for, whereas the case class is a class in doing—though the doing be mental and verbal; it is a cooperative, supervised, systematic exercise in diagnosis of a problem; in organization of data; in the arts of reaching for, building, and testing solutions or arguments, of making reasoned judgments of policy and putting them to the test; an exercise in the craft-skill—and the human skill—of accurate, orderly, persuasive formulation in language of thoughts that need such organization and expression in order to accomplish a given purpose.

Llewellyn, *supra* note 53, at 215; *cf.* Judith Welch Wegner, *Reframing Legal Education's "Wicked Problems"*, 61 RUTGERS L. REV. 867, 978 (2009) (proposing that professors teaching large, upper-division courses rely heavily upon lectures to convey information, thereby laying the groundwork for smaller, more

based technologies—technologies that are likely to become pervasive in mainstream higher education regardless of our initial eagerness to embrace them[229]—faculty can expose students to doctrinal frameworks *before* they enter the classroom. Confronted then with the need to rethink the chief purposes of live classroom sessions, faculty can focus on developing activities that build on those doctrinal frameworks in ways aimed squarely at strengthening students' analytic capacities and solidifying students' understanding of those doctrinal frameworks in the process.[230]

The technology for teaching students prior to meeting them in the classroom is widely available and fairly inexpensive; there is no need to invest millions of dollars unless, like Stanford, Harvard, Berkeley, MIT, and others, an institution wishes to be able to enroll tens of thousands of students in a single online course and provide each of those students with a complete learning experience. Conveying information to students one will meet later in the classroom is less complicated. The current market leader for such technology appears to be Panopto, a company founded in 2007 by individuals associated with Carnegie Mellon University.[231] Professors at Carnegie

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specialized courses in which professors can more easily deploy other teaching techniques).

229. *See supra* Parts I.A-C.

230. *See* H.G. Schmidt, *Foundations of Problem-Based Learning: Some Explanatory Notes*, 27 MED. EDUC. 422, 425-26 (1993) ("One of the reasons . . . that [medical] students seem to be unable actually to use in a clinical setting what they have learned previously through books and lectures is that their knowledge is not yet organized in a way suitable for the kind of tasks required of them in that setting. It is generally assumed that the necessary restructuring of the knowledge base only takes place in response to the demands of the tasks posed."). In 1948, Llewellyn himself urged law faculties to explore ways to satisfy coverage demands outside of class, so that face-to-face class time could be spent on more pedagogically powerful activities. *See* Llewellyn, *supra* note 53, at 215-16.

231. *See About Panopto*, PANOPTO, http://www.panopto.com/video-capture-and-management-software-company (last visited July 23, 2012) (describing the company's founding); *Panopto Reaches 400 Adoptions and 2.7 Million Students*, PANOPTO, http://www.panopto.com/news/panopto-reaches-400-adoptions-and-27-million-students (last visited July 23, 2012) ("Over the last three years, Panopto has deployed more campus-wide adoptions than all other lecture capture vendors combined . . . ."). Needless to say, I have no connection whatsoever with

Mellon initially developed the technology for the purpose of enabling faculty members to share recordings of their classroom lectures with students and colleagues who could not originally attend, though the technology was conducive to a range of other uses, as well.[232] By October 2011, Panopto had entered into more than four hundred institutional license agreements,[233] making the odds reasonably good that the reader's home institution already has enabled its faculty members to use Panopto's technology in their courses.

As a starting point for cautious users, the software enables professors to make audiovisual recordings of their classroom lectures and then supply those recordings online to their future students.[234] Alternatively, an instructor could sit in his or her office with a webcam and record podcasts of lectures. In either of those ways, a faculty member could create a library of doctrinal presentations comparable to the lectures that BARBRI markets online to law students and individuals preparing for their Bar exams.[235]

Panopto; I offer their technology only as a prominent example of what is currently available to faculty members on many university campuses, including my own.

232. *See Panopto: Interview with Ryan Jennings*, M62 (Oct. 29, 2010), http://www.m62.net/presentation-skills/presentation-technology/panopto-interview-with-ryan-jennings/.

233. *See Panopto Reaches 400 Adoptions and 2.7 Million Students*, *supra* note 218.

234. *See About Panopto*, *supra* note 231.

235. *See Active Legal Learning*, BARBRI, http://www.barbri.com/about/innovation/activeLegalLearning.html (last visited September 22, 2012) (explaining its online software and test-taking software). On that score, for those who are deeply skeptical about the value of Web-based technology in legal education, it is worth remembering that Bar-takers frequently rely upon recorded online presentations to learn areas of the law in which they did no formal coursework. Indeed, not even recorded lectures are necessary to learn new areas of law. *See* Anthony G. Amsterdam, *Clinical Legal Education—A 21st Century Perspective*, 34 J. LEGAL EDUC. 612, 615 (1984) (noting that students spend a lot of classroom time studying doctrinal frameworks that they could learn just as effectively on their own). We might argue that the subject matters we teach are marked by all manner of subtleties necessitating classroom treatment. At the end of the semester, however, most of us administer examinations that call upon students to identify and apply doctrinal principles that pertain to hypothetical factual scenarios—precisely the same activities that Bar examiners ask our graduates to perform, even in areas

We would be missing significant opportunities, however, if we used the technology merely to teach in ways that have the look and feel of traditional classroom presentations. The technology enables professors to be much more creative in their efforts to convey information in a manner aimed at awakening student interest and laying the foundation for higher-level analytic work. Working from his or her computer, a faculty member can record presentations in which the visual components are the displayed contents of his or her own computer screen.[236] An instructor can thereby create a presentation containing a sequence of texts, graphs, drawings, PowerPoint slides, and photographs[237]—the software simply records those screen images, while simultaneously recording whatever the instructor says as the images are displayed.[238] With a digital tablet, an instructor can write and draw diagrams on the displayed images, such as by marking up a statute, annotating in the margins of a judicial opinion, or using the screen in the same ways one would use a chalkboard.

Although my primary aim here is to promote a means of reserving the classroom for advanced analytic activities, using Web-based technology to teach our students carries other benefits, as well. Students can watch presentations multiple times, for example, when they find the material especially tricky. If the online presentations are sufficiently well indexed, students can easily find materials they wish to review—something that research indicates students find

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of the law that many of those graduates have never formally studied. Students quickly learn those new areas of law by working their way through a series of readings and lectures.

236. *See Enterprise Demo*, PANOPTO, http://www.panopto.com/showcase (last visited July 17, 2012) (providing a series of short presentations on Panopto's capabilities).

237. *See id.* Panopto's software evidently does not currently permit one to record the audio component of video clips that one inputs into a Panopto presentation; thus, one would have to provide students with a separate link to any such videos that one wanted students to see and hear. *See id.*

238. *See id.* Of course, this practice raises copyright implications that will have to be resolved on a case-by-case basis. It merits noting, however, that officials at Berkeley and Yale have decided not to worry very much about being sued for copyright infringement based upon the content of faculty members' online presentations, and have said they will be aggressive, if necessary, in making arguments based upon fair use. *See* WALSH, *supra* note 164, at 210-13.

beneficial.[239] Professors can intersperse their presentations with short questions or exercises aimed at helping students monitor their own learning—interventions that research indicates can improve students' learning.[240] Whenever it is appropriate, professors can re-use their recorded presentations from semester to semester, thereby enabling themselves to redeploy some of their time and energy to other teaching needs. The technology also opens the door for methods of instruction that might not work as well in a large classroom. A professor might prepare an online presentation, for example, in which he or she demonstrates how an effective reader problematizes a judicial opinion, statute, or other legal text by raising questions about its contents during the reading process.[241]

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239. *See* Dongsong Zhang et al., *Instructional Video in e-Learning: Assessing the Impact of Interactive Video on Learning Effectiveness*, 43 INFO. & MGMT. 15, 24 (2006) ("Our study demonstrated that simply incorporating video into e-learning environments may not always be sufficient to improve learning. Interactive video that provides individual control over random access to content may lead to better learning outcomes and higher learner satisfaction.").

240. *See* Tianguang Gao & James D. Lehman, *The Effects of Different Levels of Interaction on the Achievement and Motivational Perceptions of College Students in a Web-based Learning Environment*, 14 J. INTERACTIVE LEARNING RES. 367, 376 (2003) (finding that students in online learning environments perform better when they are periodically presented with multiple-choice or true-false questions or when they are asked to generate examples or scenarios based on the presented material, compared to students who merely watch the online presentations); MEANS ET AL., *supra* note 204, at 45 (concluding, based on numerous empirical studies, "that promoting self-reflection, self-regulation and self-monitoring leads to more positive online learning outcomes"). *See generally* THE CARNEGIE REPORT, *supra* note 10, at 188-89 (encouraging law faculty to provide students with feedback during the semester through formative assessments, rather than relying almost exclusively upon end-of-term summative assessments).

241. *See* Dorothy H. Deegan, *Exploring Individual Differences Among Novices Reading in a Specific Domain: The Case of Law*, 30 READING RES. Q. 154, 163-64 (1995) (finding, based on empirical research, that high-performing law students problematize a legal text as they read it by asking questions about the text's meaning or likely direction, noting possible inconsistencies or weaknesses in the text's arguments, and the like); *id.* at 166 (cautioning that the research does not make clear whether there is a cause-and-effect relationship between using such strategies and receiving higher grades); Peter Dewitz, *Legal Education: A Problem of Learning from Text*, 23 N.Y.U. REV. L. & SOC. CHANGE 225, 240-42 (1997) (encouraging professors to model effective case-reading strategies for students); Fajans & Falk, *supra* note 65, at 192 (encouraging professors to "try to show how complex reading really is, how we create texts as we read, and how

Perhaps the most practical ancillary benefit of using Web-based technology to introduce students to basic doctrinal information is that the students whom law schools will be most eager to recruit in the years ahead are likely to expect it. As a starting point, students today already are far more comfortable with educational uses of digital technologies than many of their professors.[242] If the "MOOC" initiatives I have described[243] bear fruit at Stanford, Harvard, Yale, and elsewhere, undergraduate students at elite institutions are going to become accustomed to viewing online presentations when preparing for class. So long as those undergraduates' professors devise productive ways to fill their newly available classroom time, those students are going to arrive at our doorstep embracing pedagogical norms that are very different from those to which we were exposed during our own formal schooling. In the eyes of future students, law schools that fail to capitalize on the power of online technologies in an effort to make the classroom experience more powerful might seem like dusty relics of an inefficient pedagogical past.

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Clayton Christensen, of the Harvard Business School, writes that, "[b]efore long, even the best-taught face-to-face courses will be hybridized, suffused with online components,"[244] and that the most successful universities will be those that "embrace the learning advantages to be found across the spectrum that runs from fully face to face to fully online instruction."[245] The explosion of interest among leading universities in companies like Coursera and edX suggests Christensen is correct. It increasingly appears that institutions that stubbornly restrict themselves to traditional teaching techniques will find it difficult in the

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profoundly interesting and rewarding it is to listen hard and pay attention to what we hear as we read").

242. As former Tufts University President Lawrence Bacow puts it, "[t]oday's students have only known a digital world. In time these students will become tomorrow's faculty. Thus I believe change is inevitable. Teaching in the future will involve far more online instruction than it does today. The only question is how long will this change take." Long, *supra* note 160.

243. *See* *supra* Part III.A-B.

244. CHRISTENSEN & EYRING, *supra* note 162, at 340-41.

245. *Id.* at 328.

years ahead to justify their current cost structures, and will find themselves pushed ever closer to the sidelines in the market for students seeking a transformative education.

Regardless of whether or when those macro-level forecasts are borne out, Web-based technology provides individual faculty members today with an opportunity to increase the value of their students' educational experience. Building on the doctrinal information to which we would introduce our students beforehand, how could we most effectively use our classrooms to increase the clarity and rigor with which our students think?

IV. THE ANALYTIC CLASSROOM

In the pages that remain, I do not aim to provide a comprehensive list of classroom exercises that will increase students' analytic firepower. We still do not know how best to train students to think more clearly and more rigorously, particularly in large-enrollment classes where limitations on the professor's time and energy preclude frequent individualized feedback and interaction.[246] It thus is too soon to prescribe one or more precise methodologies to supplement or replace the case-dialogue method. What we need now is a period of broad experimentation—not

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246. *See* Lehman et al., *supra* note 97, at 441 ("The truth is that we know very little about reasoning and how to teach it."). Such research is not, however, nonexistent. *See, e.g.*, Diane F. Halpern, *Teaching Critical Thinking for Transfer Across Domains*, 53 AM. PSYCHOLOGIST 449, 451 (1998) (proposing a research-based model for teaching critical-thinking skills, portions of which have influenced the activities I suggest here in Part IV). Derek Bok has usefully discussed the issue—albeit at a high level of abstraction—in the context of teaching critical-thinking skills to undergraduates:

> [P]assive lecturing and drill can help students memorize rules and concepts and apply them to a limited range of problems similar to those covered in class, but they do little to equip undergraduates to apply their knowledge to new problems. Merely inviting students to ask questions or allowing them to carry on a formless discussion among themselves is not much better. Instead, instructors need to create a process of active learning by posing problems, challenging student answers, and encouraging members of the class to apply the information and concepts in assigned readings to a variety of new situations.

DEREK BOK, OUR UNDERACHIEVING COLLEGES: A CANDID LOOK AT HOW MUCH STUDENTS LEARN AND WHY THEY SHOULD BE LEARNING MORE 116-17 (2006).

necessarily experimentation of a formal, rigorously empirical sort, but experimentation of the kind that we all do when we are inspired to get at least an initial sense of how we and our students will respond to new things in the classroom. We certainly would benefit from formal empirical analysis of our pedagogical options, but we first need to generate those options. What follows is my own contribution to the initial pool of possibilities.

A. *Problematizing Through Premise-Identification*

In the mid-1980s, a survey of college professors representing a number of disciplines revealed that one of the most common weaknesses in students' analytic thinking is "accepting the central assumptions in an argument without questioning them."[247] Anecdotally, this appears to be a particular problem for many law students, who often are too quick to accept courts' pronouncements as if those rulings flowed inevitably from prior law.[248] As Elizabeth Fajans and Mary Falk wrote in the *Cornell Law Review* twenty years ago, "[e]ven the best and brightest students too often scan judicial opinions for issue, holding, and reasoning and call that 'reading' . . . . To be effective counselors and advocates, lawyers cannot take legal documents at their word."[249]

In an effort to help students learn how to problematize legal texts in strategically useful ways, professors could devote some of their face-to-face sessions to working together as a class to explicate, as exhaustively as possible, the logical structure of selected judicial opinions. We could ask students to identify every premise in a court's argument, starting with the premises that explicitly appear in the opinion, but then moving to the critically important

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247. Donald E. Powers & Mary K. Enright, *Analytical Reasoning Skills in Graduate Study: Perceptions of Faculty in Six Fields*, 58 J. HIGHER EDUC. 658, 670 (1987); *see also id.* at 662-63 (describing the mechanics of the survey of faculty members in the fields of English, education, psychology, chemistry, computer science, and engineering).

248. *See supra* notes 64-65 and accompanying text (noting this critique).

249. Fajans & Falk, *supra* note 65, at 163; *see also* Deegan, *supra* note 227, at 161-63 (discussing the importance of being able to problematize a text while reading it); Dewitz, *supra* note 227, at 246 (noting the pedagogical value of teaching students to deploy "problem formation strategies").

implicit premises that evidently guided the court's judgments about where to begin and end its explicit argumentation. In the first such exercise or two of a given semester, we could push the identification of implicit premises back deeply into the world of jurisprudence—the world from which courts purport to draw their authority to speak authoritatively about the law's demands—in an effort to short-circuit many students' instinctive willingness to accept what a court says simply because a court said it. Once students have fully elaborated the court's argument, they then could work together to identify the argument's vulnerabilities and ambiguities, and discuss ways in which those vulnerabilities and ambiguities might be exploited or ameliorated by future courts and litigants.

B. *Socratic Writing*

Even in large-enrollment courses, faculty could transform their classrooms into a setting where each student must regularly express important ideas in writing and where analysis of that writing is the focus of classroom discussion. Of course, we already often place the spotlight on students' *spoken* words, through Socratic dialogue. But the analytic precision required by written communication, particularly in the field of law, is far greater than is often required in oral exchanges, even when one participant in those exchanges is a Socratic instructor. Requiring students to express themselves in writing thus opens up additional teaching opportunities for the professor, and gives students yet more practice with a mode of communication that will be central to their professional careers.

To make it possible, one would need things that already are commonly found in law schools today: a laptop in front of each student, wireless access to the Internet, a computer at the front of the room for the professor, a means of projecting the professor's computer images onto a large screen, and a technical-support person willing to do some set-up work prior to the beginning of the semester. Once students were in the classroom, the professor would ask each student to draft or edit a short text, such as a short statutory provision, or a clause in a contract, or a case's holding, or the rule that emerges when one synthesizes a line of cases, or a paragraph-long rebuttal to a majority

opinion that the class has previously read. Students would be given a short period of time to draft their texts. Using "wiki" technology or another suitable vehicle,[250] students then would click a button on their computers to post their passages on a non-public webpage. By clicking on a student's name or photo, the professor then could "call on" any student in the room, immediately displaying that student's text on the large screen at the front of the room. Alternatively, the professor could pull up multiple student drafts at once in order to compare different students' work. Those texts could then become the focal point for whatever analytic teaching purposes the professor deems most appropriate.

C. *Reverse-Engineering Exams*

In one of my own courses (Federal Courts), I have sometimes set aside a day for what I describe as an exam-writing activity. In preparation for that class, I tell my students about a week in advance that I want them to review their notes up to that point in the semester and then write a traditional essay question, consisting of a page-long factual scenario, aimed at testing the question's readers on their ability to deploy multiple portions of the course material. On the designated day, the students bring four or five hard copies of their questions to class, and I break them into groups of that same size. Within their separate groups, they exchange copies of their questions with one another, then work their way through them one by one, first trying to identify the legal issues that the scenario's author intended to target, and then discussing what they would regard as a first-rate analysis of those issues.

There have been semesters in which, due to the press of time, I have omitted this hour-long activity (thus illustrating one of my own decisions favoring subject-matter coverage over students' analytic development). When I have made time for the exercise, however, students' response has been highly positive. Students often find that writing a good factual scenario is far more difficult than they imagined, because they have to go back over the course material, think hard about the kinds of scenarios in which that material

250. Here at the University of Iowa, our technical-support specialists have told me that they can set this up using "parent" and "child" wiki pages.

would be implicated, then construct a situation in which a number of challenging legal questions are presented. During the class session itself, the volume of the separate group discussions quickly rises, as students compare their class notes, argue with one another about the best understanding of the course material, and call me over to help them work through their disagreements.

D. *Interdisciplinary Critiques*

Law, of course, is not an autonomous discipline; economics, sociology, psychology, political science, philosophy, literary analysis, and other fields of academic inquiry can usefully shed light on the legal system and the choices actors make within it. Although legal scholarship has been heavily influenced by other disciplines, interdisciplinary perspectives have not made comparable headway into many of our classrooms.[251] As Lee Bollinger writes, "[i]t is as if law schools are stuck between the Langdellian revolution of the late nineteenth century and the interdisciplinary revolution of the late twentieth century."[252]

A faculty member could devote any number of class sessions to bringing interdisciplinary perspectives to bear on the course's doctrinal material. A conventional way to achieve that objective would be to assign various readings for class discussion. Professors might engage more of their students, however, if, at the beginning of the semester, they designated a number of disciplines whose insights the class will explore throughout the course, and then asked each of their students to sign up to become classroom "experts" for one of the designated disciplines, based on their undergraduate majors or current personal interests. Professors could then assign a carefully selected handful of scholarly writings to the members of each designated group, thereby introducing (or reacquainting) them with some of their chosen discipline's terminology and insights. From time to time throughout the semester, students from the various disciplinary groups could be called upon to talk about the analytic perspectives that their disciplines might offer on the doctrinal material then under discussion.

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251. *See* Bollinger, *supra* note 73, at 2173.

252. *Id.*

E. *Ends-Means Thinking and Confronting the Unknown*

A cluster of persistent objections to the case-dialogue method focuses on the thought- and creativity-blunting effects of continually studying courts' legally authoritative rulings. In his 1984 piece on clinical legal education, for example, Anthony Amsterdam criticized law schools for not focusing more heavily on ends-means thinking, in which students must confront the uncertainties that arise when one evaluates a range of possible outcomes for a client and a range of possible means of achieving those outcomes.[253] Roy Stuckey and his co-authors similarly complain that the case-dialogue method does not help students prepare for careers in which they will have to help their clients construct factual worlds and in which they will have far more latitude than an appellate judge to pursue creative problem-solving possibilities.[254] All of this relates to what college educators from across the disciplines identify as a critically important analytic skill: "[r]easoning or problem solving in situations in which all the needed information is not known."[255]

We can work to develop our students' skills in these areas—without losing any of the attention-grabbing drama that flows from studying real-life disputes[256]—by using the classroom to delve deeply into the choices made by litigators long before their clients' disputes landed in front of a judge. Consider, for example, the story underlying the U.S. Supreme Court's decision to strike down Texas's ban on same-sex sodomy in *Lawrence v. Texas*.[257] As Dale Carpenter reports in his recent book *Flagrant Conduct*, the attorneys for the two accused men faced a number of challenges when constructing their case, beginning with the fact that their clients—fairly unsympathetic characters living in a rundown neighborhood outside Houston—were not partners in a relationship and likely never even engaged in sexual activity with one another on the night they were charged

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253. *See* Amsterdam, *supra* note 221, at 614-15.

254. *See* STUCKEY ET AL., *supra* note 44, at 138-39.

255. Powers & Enright, *supra* note 233, at 670 (emphasis omitted).

256. *Cf.* Carrington, *supra* note 39, at 746 (observing that case narratives are often more interesting than abstract lectures).

257. 539 U.S. 558 (2003).

with violating the anti-sodomy statute.[258] The defendants' attorneys worked hard to deflect attention from those facts and to construct a picture of the sort that ultimately appeared in Justice Kennedy's opinion for the *Lawrence* majority: a picture of two adults charged with doing nothing more than physically expressing the intimacy of a close relationship.[259] (Hence the title of Dahlia Lithwick's review of Carpenter's book: *Extreme Makeover*.[260]) How should an attorney weigh justice for her criminally charged client against justice for others who might benefit if her client foregoes a viable defense? What ethical implications does that balancing act entail? What were the possible legal theories available to the *Lawrence* defendants, and why might they have prioritized some of those theories over others? What strategies are available for attacking precedent that weighs squarely against one's client, like the precedent that stood squarely in the path of the *Lawrence* defendants?[261] Of course, these are the very sorts of questions that a professor asks one's students when using the traditional case-dialogue method. But when students perceive that the most important item on a day's classroom agenda is to master the doctrinal specifics of the court's ruling, those questions risk being treated superficially, as brief diversions from the main event. By addressing the doctrinal mechanics of the court's ruling ahead of time, a professor could clear the way for a class discussion and for role assignments that are focused more squarely on other analytic challenges.

F. *The Case-Dialogue Method (Old School)*

Although I have reservations about whether this is a path that ought to be widely pursued, it bears noting that restructuring our teaching in the ways I am proposing would enable a professor—for some portions of his or her

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258. *See* Dahlia Lithwick, *Extreme Makeover: The Story Behind the Story of* Lawrence v. Texas, NEW YORKER, Mar. 12, 2012, at 76, 76-77.

259. *See Lawrence*, 539 U.S. at 567 ("When sexuality finds overt expression in intimate conduct with another person, the conduct can be but one element in a personal bond that is more enduring.").

260. Lithwick, *supra* note 244, at 76.

261. *See* Bowers v. Hardwick, 478 U.S. 186, 196 (1986) (upholding Georgia's anti-sodomy statute).

courses—to revert to the style of case-dialogue instruction that first brought Langdell's methodology the reputation of prioritizing analytic development over subject-matter coverage.[262] By teaching segments of important doctrinal material online, a professor could reserve other portions of the course for teaching in the patient, time-consuming manner that Langdell's methods require.[263] With respect to the areas of law set aside for the classroom, the professor could be non-transparent in his or her conveyance of doctrinal propositions, pushing students to do the heavy lifting on their own.

CONCLUSION

When Yale University launched its Open Yale Courses initiative in 2007,[264] Ramamurti Shankar and Langdon Hammer were among the first Yale faculty members who volunteered to have their courses recorded and made freely available on the Internet—Professor Shankar presented Fundamentals of Physics and Professor Hammer presented Modern Poetry.[265] Like other participating Yale professors, however, both men worried they would see a drop in classroom attendance once students figured out that, by viewing the online recordings, they could vicariously take part in a prior semester's coverage of the same material. Shankar solved that problem by simply declaring that he would never teach the course again.[266] Hammer said that he planned to take a break from the course and that, if he ever returned to it, he might require his students to watch the videos beforehand, and then use the classroom to discuss the material in greater depth.[267] The attendance problem they feared was the same problem that Daphne Koller later

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262. *See supra* Part I.A (describing the views of Langdell's early disciples).

263. *See supra* notes 50-52 and accompanying text (noting the method's time demands). Much the same can be suggested for professors who favor the problem method. *See id.* Using online technology to carry the burden of introducing students to a portion of a course's doctrinal material, a faculty member could spend significantly more time discussing factual scenarios. *See id.*

264. *See supra* note 173 and accompanying text.

265. Both courses remain available online today. *See Courses*, OPEN YALE COURSES, http://oyc.yale.edu/courses (last visited July 24, 2012).

266. Guess, *supra* note 173 (quoting Shankar).

267. *Id.*

confronted in a computer science course at Berkeley, when many students opted to watch a series of Koller's videotaped presentations rather than attend her lectures in person.[268]

Those concerns about student attendance lead to a wonderfully provocative question: Of what use is the classroom when students already have heard a professor—whether their own or another respected scholar at a different university—take at least a first cut at explaining much of the information on which students traditionally have expected to be tested?

That is precisely the question that we who teach doctrinal courses should force ourselves to answer. Indeed, doctrinal professors have particularly good reasons to rethink their classroom objectives in fundamental ways. The continuing demand for broad subject-matter coverage,[269] our tired reliance upon diluted forms of the case-dialogue method,[270] students' common reliance upon prior students' class notes and outlines[271] (resources that serve as proxies for the class recordings that posed problems for Shankar, Hammer, and Koller[272]), empirical indications that law schools are not transforming their students' analytic capacities in the ways they intend,[273] heightened economic pressure to maximize the value of law students' educational experiences,[274] and the increasing pedagogical use of Web-based technology in prestigious undergraduate programs[275] all point toward the need for significant change.

It is time, in short, to bring our teaching methods more fully into line with our convictions. Langdell's early disciples were certainly right about one thing: the highest purpose of legal education should not be to fill students' minds with content, but rather to train students to think

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268. *See supra* notes 190-98 and accompanying text (describing Koller's dilemma and her subsequent co-founding of Coursera).

269. *See supra* notes 26-27, 50-52 and accompanying text.

270. *See supra* notes 69-74 and accompanying text.

271. *See supra* notes 28-31 and accompanying text.

272. *See supra* notes 250-54 and accompanying text.

273. *See supra* Part II.

274. *See supra* notes 11-17 and accompanying text.

275. *See supra* Parts III.A-B.

more analytically.[276] Derek Bok's observations regarding undergraduate education more than a quarter of a century ago remain apt for legal education today:

> Merely accumulating information is of little value to students. Facts are soon forgotten, and the sheer volume of information has grown to the point that it is impossible to cover all the important material or even to agree on what is most essential. . . . The ability to think critically—to ask pertinent questions, recognize and define problems, identify the arguments on all sides of an issue, search for and use relevant data, and arrive in the end at carefully reasoned judgments—is the indispensable means of making effective use of information . . . .[277]

To help students increase their analytic capabilities, we must relax the longstanding link between teaching students doctrine and developing students' minds. We need not make the entire shift overnight. Beginning by selecting just one or two segments of each of our doctrinal courses,[278] we could gradually develop our individual methods of teaching online, experiment with different in-class analytic activities to find what works effectively for our students and suits our individual teaching styles and strengths, and take advantage of some of the insights and innovations that undoubtedly will emerge from prestigious universities' new commitment to teaching through the Internet. But we do need to move steadily toward a system in which introducing students to doctrinal frameworks is merely a prelude to an even more analysis-intensive classroom experience. If we pursue that agenda creatively, we can help lead American legal education into a long-overdue period of innovation, and we and our successors can soon look back on law schools' current difficulties with gratitude for the push.

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276. *See supra* Part I.A.

277. BOK, *supra* note 232, at 109.

278. Because the case-dialogue method effectively grips most students' attention for at least a semester, it probably is best to exempt the first semester of required courses from significant experimentation, at least until we have refined our upper-division methodologies. *See* Bok, *supra* note 18, at 13 (praising the case-dialogue method as a tool for teaching first-year courses, but observing that "the law school experience tends to grow repetitive, and interest declines steadily throughout the last two years"); *see also supra* note 64 (citing additional authorities on this point).