OPEN BOOKS, BETTER SKILLS: AN ARGUMENT FOR LIMITED OPEN-BOOK EXAMS

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I. INTRODUCTION

"But the bar exam! The bar exam is closed-book!" This is the response one is most likely to hear in classrooms and in faculty meetings when the subject of open-book exams is broached by the courageous first-year law student ("1L") or a new professor. The bar exam, as well as concerns about rigor, have led many law schools and law professors to adopt closed-book exams without critically examining the pedagogical ramifications of this choice. This Article puts forth the argument that limited open-book exams, by allowing a defined, small array of student-created study materials, produce greater analytical gains for students, leading to better thinking and writing skills necessary to pass the bar exam. Limited open-book exams also encourage better life-long learning skills, like effective use of spaced practice, and how to use summary methods, such as outlining, to organize and synthesize large bodies of knowledge, instead of relying on ineffective methods, such as rote memorization and rereading. The core skill needed for success in practice, and more relevant to law students, on the bar exam, is the development of higher-order thinking and problem-solving capabilities, or in law school parlance, "thinking like a lawyer."

Learning to "think like a lawyer" is a painful struggle for most students, requiring them to eschew methods of thinking and writing that have been practiced since primary school. Students focusing on lower-order thinking skills and established writing

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skills stay in their comfort zone, but do not spend their study time developing the higher-order skills necessary to succeed on the bar exam: analytical thinking and writing. This leaves bar success professionals the impossible job of teaching analytical reasoning and writing in final-semester bar success courses, or more troubling, leaving analytical skill building to commercial bar prep companies.

While some research has been conducted at law schools in the United Kingdom and Commonwealth nations,[1] this is an unexamined topic among law schools in the United States. This Article will trace how the birth of the modern law school and the ascendance of the American Bar Association ("ABA") led to curricular changes at law schools in response to the declines in bar passage rates. Changes to the ABA accreditation standards, beginning in 2008, led to anecdotal reports of changes in law school testing practices; schools that once used open-book or limited open-book exams moved to closed-book exams in an attempt to mimic the format of the bar exam. While these valiant attempts by law schools to better prepare their students for the bar exam were well-intentioned, they neither led to increased bar passage, evidenced by the continued decline in bar pass statistics, nor better prepared law students for the practice of law, where responding to a client without adequate research would lead to a charge of legal malpractice. Lastly, this Article concludes with pedagogical suggestions for law professors eager to help their students master the substantive law as well as build skills necessary for bar exam and law practice success.

II. BAR EXAM HISTORY: ORIGINS OF ABA POWER AND RISE OF PROFESSIONAL LAW SCHOOLS

The story of how closed-book exams came to be standard practice at many law schools begins with the origins of the modern law school. Legal education began a slow march toward standardization and away from apprenticeships and practical learning with the advent of Harvard Law School and the tenures of Christopher Columbus Langdell and Charles William Eliot.[2] Charles William Eliot, then President of Harvard College, brought

1. *See infra* pt. V.A.

2. ROBERT B. STEVENS, LAW SCHOOL: LEGAL EDUCATION IN AMERICA FROM THE 1850S TO THE 1980S 35–36 (1983).

with him a strong belief that all of academia benefitted from the application of the scientific method.[3] In 1870, Eliot hired Langdell to be the first dean of Harvard Law School, and Langdell brought with him the case method.[4]

The professional law school developed sporadically for the next half-century, with lawyers educated from both apprenticeships and what we now recognize as legal education. While no states required formal, professional legal education at the turn of the century, the professional law school's emergence as the predominant means of becoming a practicing attorney at the close of World War II ushered in the widespread use of the Langdell Method of teaching law.[5] This was the first instance of law schools playing follow-the-leader, where the leader was Harvard Law School.[6] These new schools of law largely modeled themselves on Harvard, and adopted large classes where the "sage-on-the-stage" engaged in a modified Socratic dialogue about an appellate decision with a nervous law student.[7] The ascendance of formal, standardized, post-graduate legal education gained speed with the establishment of the ABA in 1878[8] and the Association of American Law Schools ("AALS") in 1900.[9] The establishment of the ABA and AALS accelerated the move to standardize legal education by creating standards that rewarded the reproduction of the Harvard Law School teaching methods.[10] The ABA was explicitly created to raise "the standards of the profession" and homogenize professional legal education by requiring "that all applicants should learn the principles of law in a school, then apply them for at least a year in an office, and finally pass a public

3. *Id.* at 51–52.

4. *Id.* at 36–38.

5. John O. Sonsteng et al., *A Legal Education Renaissance: A Practical Approach for the Twenty-First Century*, 34 WM. MITCHELL L. REV. 303, 330–31 (2007).

6. The most recent example of the follow-the-leader mentality amongst law schools is the race to pull out of the *U.S. News and World Report* rankings. Anemona Hartocollis, *Elite Law Schools Boycotted the U.S. News Rankings. Now, They May Be Paying a Price.*, N.Y. TIMES (Apr. 21, 2023), https://www.nytimes.com/2023/04/21/us/21nat-us-news-rankings-law-medical-school.html. Although it was Yale Law School, not Harvard, that first refused to provide data, in reality, the issue is moot. *See id. U.S. News and World Report* can use publicly available data to produce their rankings. But this did not stop Harvard, Stanford, U.C. Berkeley, Georgetown, and Columbia Law Schools from quickly following Yale's lead and announcing they too were not providing data to *U.S. News and World Report*. *Id.*

7. STEVENS, *supra* note 2, at 36.

8. *Id.* at 27.

9. *Id.* at 38.

10. *Id.* at 36–37.

examination by impartial examiners appointed by the courts."[11] Two out of three of those recommendations became the standard at law schools across the country; practice experience had to wait until law schools adopted clinical education beginning in the 1960s.[12]

The wishes of the ABA were enacted during the first three decades of the twentieth century. The ABA began crafting the standards used to accredit schools in 1921,[13] and began officially accrediting law schools in 1923, which assisted their mission to standardize legal education.[14] The movement towards the standardization of curriculum and methods across law schools allowed the "scientific" method of examining appellate cases in a large lecture hall to thrive.[15] Standardization of curriculum included standardization of testing methods, as most law schools adopted one end-of-semester summative assessment as the sole determinant of the final grade in the course.[16] This policy was adopted because law school classes were large; in 1924, the ABA called for a student-teacher ratio of one professor for every one hundred students.[17] Large law school classes became the norm, testing methods became uniform, and legal education became lockstep.

III. ABA ACCREDITATION POWERS AND THE BAR EXAM

Although the ABA has promulgated accreditation standards for law schools since 1921,[18] the standards only recently became focused on law school graduate success on the bar. The accreditation standards, created by the Section on Legal Education

11. *Id.* at 27–28 (quoting Lewis L. Delafield, *The Conditions of Admissions to the Bar*, 7 PA. MONTHLY 960, 969 (1876)).

12. Robert MacCrate, *"The Lost Lawyer" Regained: The Abiding Values of the Legal Profession*, 122 DICK. L. REV. 153, 168 (2017); Peter A. Joy, *The Uneasy History of Experiential Education in U.S. Law Schools*, 122 DICK. L. REV. 551, 563 (2018).

13. Derek Luke, *From Filling Buckets to Lighting Fires: The ABA Standards and the Effects of Teaching Methods, Assessments, and Feedback on Student Learning Outcomes*, 81 U. PITT. L. Rev. 209, 215 (2019).

14. James S. Heller & Simon F. Zagata, *Back to the Future: ABA Law School Accreditation in the 21st Century and America's First Law School's Battle to Survive in the 1970s*, 111 LIBR. STAFF PUBL'NS. 509, 509 (2019).

15. STEVENS, *supra* note 2, at 52.

16. Ron M. Aizen, *Four Ways to Better 1L Assessments*, 54 DUKE L.J. 765, 768 (2004).

17. *Id.*; STEVENS, *supra* note 2, at 173.

18. STEVENS, *supra* note 2, at 172–73; *see* David Segal, *Law School Economics: Ka Ching!*, N.Y. TIMES (July 16, 2011), https://www.nytimes.com/2011/07/17/business/law-school-economics-job-market-weakens-tuition-rises.html?smid=url-share.

and Admission to the Bar ("the Council"), promulgates these standards to determine if a school receives, or if already accredited, retains, their ABA accreditation, and, critical for students, allows graduates to sit for the bar exam in fifty states.[19] For most of their existence, the ABA and the Council implemented standards that were primarily concerned with input measures; law schools met the accreditation standards by demonstrating that they were teaching a curriculum that met their benchmarks, instead of measuring what students were actually learning in law school.[20]

Beginning in the 1990s, the ABA began to feel increasing pressure from disparate sources. Bar pass rates hit their peak in 1994 and began to decline throughout the rest of the decade.[21] At the turn of the twenty-first century, states began increasing their bar pass standards.[22] The confluence of these two forces led to increased pressure on the ABA to examine bar pass rates by law schools. In 2005, the ABA placed four California law schools on intense review due to low bar pass results: Whittier, Golden Gate, Western State, and Thomas Jefferson.[23] Although the ABA's action was limited to only a small number of accredited law schools at that time, it struck fear in the hearts of many law school administrators and some faculty.

This was a slow-moving shift in priorities for the ABA. Law schools began to adopt courses focused on bar passage,[24] despite the ABA prohibition on offering classes focused on bar preparation for credit or as a graduation requirement.[25] These courses began to be offered despite law schools', and the ABA's, persistent fear of

19. Although states can accredit law schools and allow their graduates to sit for the bar in that state, such as California, only ABA accreditation allows graduates to sit for the bar exam in any state. *See* BENJAMIN H. BARTON, FIXING LAW SCHOOLS: FROM COLLAPSE TO THE TRUMP BUMP AND BEYOND 3 (2019).

20. A.B.A. SEC. OF LEGAL EDUC. AND ADMISSIONS TO THE BAR, MANAGING DIR.'S GUIDANCE MEMO: STANDARDS 301, 302, 314 and 315, at 3 (June 2015).

21. Christian C. Day, *Law Schools Can Solve the "Bar Pass Problem"—"Do the Work!"*, 40 CAL. W. L. REV. 321, 321 (2004).

22. *See generally* William C. Kidder, *The Bar Examination and the Dream Deferred: A Critical Analysis of the MBE, Social Closure, and Racial and Ethnic Stratification*, 29 LAW & SOC. INQUIRY 547 (2004).

23. BARTON, *supra* note 19, at 3–4; John Nussbaumer, *The Disturbing Correlation Between ABA Accreditation Review and Declining African-American Law School Enrollment*, 80 ST. JOHN'S L. REV. 991, 996 (2006).

24. Aleatra P. Williams, *The Role of Bar Preparation Programs in the Current Legal Education Crisis*, 59 WAYNE L. REV. 383, 396 (2013).

25. *Id.*; *see also* Derek Alphran et al., *Yes We Can, Pass the Bar. University of the District of Columbia, David A. Clarke School of Law Bar Passage Initiatives and Bar Pass Rates – From the Titanic to the Queen Mary!*, 14 UDC/DCSL L. REV. 9, 11 (2011).

"teaching to the bar."[26] In 2008, the ABA lifted the rule preventing law schools from offering bar success courses for credit or as a graduation requirement.[27] Thus, law schools and law professors could farm out bar prep responsibilities to usually untenured staff members and absolve themselves of the need to incorporate learning skills into the curriculum.

As bar passage rates declined across the country, the ABA began to feel pressure from outside agencies to change the manner in which they accredit law schools. Only part of the ABA's concern related to declining bar passage rates; other challenges were on the horizon. In 1995, the US Attorney General's office filed a lawsuit against the ABA for violating antitrust law.[28] The impetus for this action was, amongst other issues, the continuing failure to fully accredit Western State Law School in Fullerton, California.[29] The culmination of the lawsuit was a consent decree that prevented the ABA from "adopting or enforcing any Standard, Interpretation or Rule, or taking any action that has the purpose or effect of prohibiting a law school" from being organized as a for-profit entity.[30]

While the short-term effects of the consent decree were not wide reaching, the long-term effects were significant. The consent decree allowed several schools to become accredited over a relatively short period of time, increasing the number of accredited law schools from 180 in 1995 to 197 by 2010, an increase of 17 law schools in 15 years.[31] The increase in the number of law schools corresponded with the decrease in the percentage of graduates passing the bar exam, which accelerated through the early 2000s.[32] It would be pure speculation to attribute the continued decline in bar passage rates to the increase in the number of law schools; however, it can be said that the greater number of law students. Unless the pool of well-

26. Denise Riebe, *A Bar Review for Law Schools: Getting Students on Board to Pass Their Bar Exams*, 45 BRANDEIS L.J. 269, 280 (2007).

27. Williams, *supra* note 24, at 396, 401.

28. *What Is Going on with Western State and the ABA? An Examination of Western State University's Bid to Obtain American Bar Association Approval*, 31 W. ST. U. L. REV. 265, 273 (2004).

29. *Id.* at 273, 280.

30. *Id.* at 273.

31. *ABA-Approved Law Schools by Year*, ABA, https://www.americanbar.org/groups/legal_education/resources/aba_approved_law_schools/by_year_approved/ (last visited Aug. 30, 2024).

32. Riebe, *supra* note 26, at 270.

qualified law school applicants increased concomitantly with the number of open seats, some law schools needed to admit less-qualified students in order to operate.[33]

The forces putting pressure on the ABA—lowered bar pass rates, rising bar passage standards, and an increasing number of law schools needing students—resulted in changes in the standards to accredit law schools. These were slow-moving changes, but these changes coincided with an economic downturn that didn't follow the same pattern as prior economic downturns.

A. The Great Recession, Or When the Bottom Fell Out in Admissions

Like recessions before it, the Great Recession of 2008 began by following the same pattern as prior recessions: people who are laid off, or cannot find a job after college due to slow hiring, decide to attend graduate school.[34] Consequently, the high water mark for law school enrollment was 2010, two years into the Great Recession, when approximately 51,100 students enrolled as 1Ls in law schools across the United States.[35] By the time the majority of these law students graduated in 2013,[36] there were fewer jobs for newly-minted lawyers than there were law school graduates, and again, law schools saw a widespread decline in bar passage rates.[37]

By 2014, a year after the bumper crop of law students graduated, a confluence of forces turned this enrollment pattern on its head.[38] A flurry of law school "scam blogs" called out the high

33. Paul Campos, *The Law-School Scam*, THE ATLANTIC (Sept. 2014), https://www.theatlantic.com/magazine/archive/2014/09/the-law-school-scam/375069/; *see also* Elizabeth Olson, *Bar Exam, the Standard to Become a Lawyer, Comes Under Fire*, N.Y. TIMES (Mar. 19, 2015), https://www.nytimes.com/2015/03/20/business/dealbook/bar-exam-the-standard-to-become-a-lawyer-comes-under-fire.html?smid=url-share.

34. Rebecca R. Ruiz, *Recession Spurs Interest in Graduate, Law Schools*, N.Y. TIMES (Jan. 9, 2010), https://www.nytimes.com/2010/01/10/education/10grad.html.

35. *Historical Test Taker, Applicant and Matriculant Counts*, LAW SCH. ADMISSIONS COUNCIL, https://report.lsac.org/View.aspx?Report=HistoricalData (last visited Aug. 30, 2024).

36. The vast majority of law students are enrolled full-time and take three years to graduate.

37. Raul Ruiz, *Leveraging Noncognitive Skills to Foster Bar Exam Success: An Analysis of the Efficacy of the Bar Passage Program at FIU Law*, 99 NEB. L. REV. 141, 144 (2020).

38. Courtney G. Lee, *Changing Gears to Meet the "New Normal" in Legal Education*, 53 DUQ. L. REV. 39, 41 (2015).

tuition and low employment numbers of many law schools.[39] Simultaneously, a group of law professors led by Paul Campos and Brian Tamanaha, as well as journalists, such as Lincoln Caplan and Stanley Fish, begin criticizing the financial model law schools had relied upon.[40] High tuition but low employment in legal positions requiring a J.D., misleading employment and salary statistics, and bait-and-switch scholarship schemes were discussed in articles published by *The New York Times* and *The Wall Street Journal*, as well as in law review articles and at least one book.[41] The result of these forces was a dramatic drop in applicants, while the ABA was looking at making a similarly dramatic change in the standards.

B. Law School Responses to the Admissions and Bar Crisis of the 2010s

When the bottom fell out in law school admissions, the drop in applicants was not evenly spread across all applicant groups. The biggest drop was in applicants with high Law School Admission Test ("LSAT") scores.[42] LSAT scores are correlated (to what degree

39. *See* Lucille A. Jewel, *You're Doing it Wrong: How the Anti-Law School Scam Blogging Movement Can Shape the Legal Profession*, 12 MINN. J.L. SCI. & TECH. 239, 241 (2011).

40. Paul Campos, *Goodbye is Too Good a Word*, INSIDE THE L. SCH. SCAM (Feb. 27, 2013), http://insidethelawschoolscam.blogspot.com/2013/02/goodbye-is-too-good-word.html; BRIAN Z. TAMANAHA, FAILING LAW SCHOOLS 181–83 (John M. Conley & Lynn Mather eds., 2012); Lincoln Caplan, *An Existential Crisis for Law Schools*, N.Y. TIMES (July 14, 2012), https://www.nytimes.com/2012/07/15/opinion/sunday/an-existential-crisis-for-law-schools.html?smid=url-share; Stanley Fish, *The Bad News Law Schools*, N.Y. TIMES (Feb. 20, 2012, 9:00 PM), https://archive.nytimes.com/opinionator.blogs.nytimes.com/2012/02/20/the-bad-news-law-schools/?searchResultPosition=1; *see also* Benjamin H. Barton; *The Law-School Crash: What's Worse Than a Decade of Financial Turmoil? Not Learning from It*, CHRON. HIGHER EDUC. (Jan. 3, 2020), https://www.chronicle.com/article/the-law-school-crash/.

41. *See* Nathan Koppel, *Law School Loses Its Allure as Jobs at Firms are Scarce*, WALL ST. J., https://www.wsj.com/articles/SB10001424052748704396504576204692878631986 (Mar. 17, 2011, 12:01 AM); Joe Palazzolo, *Law Grads Face Brutal Job Market*, WALL ST. J., https://www.wsj.com/articles/SB10001424052702304458604577486623469958142 (June 25, 2012, 10:18 AM). *See generally* Christopher Polchin, *Raising the "Bar" on Law School Data Reporting: Solutions to the Transparency Problem*, 117 DICK. L. REV. 201 (2012); David Segal, *Law Students Lose the Grant Game as Schools Win*, N.Y. TIMES (Apr. 30, 2011), https://www.nytimes.com/2011/05/01/business/law-school-grants.html?smid=url-share; TAMANAHA, *supra* note 40.

42. Eric A. Chiappinelli, *Just Like Pulling Teeth: How Dental Education's Crisis Shows the Way Forward for Law Schools*, 48 SETON HALL L. REV. 1, 5 (2017) ("The percentage of matriculants with LSAT scores frequently considered high (160 and above) declined by over 22% in five years. At the same time, the percentage of matriculants with relatively low scores (below 150) increased by 68%."); *see also* Jordan Weissmann, *The Wrong People Have*

is a matter of debate) to bar pass results.[43] Thus, the applicants predicted to pass the bar with little difficulty were also a shrinking demographic category. Law schools struggling to find a sufficient number of applicants engaged in what is known as the "law school death spiral."[44] The number of qualified applicants dropped, so law schools admitted students with predictors that suggested they could not succeed in law school, and when those students failed the bar exam, the bad press and ABA actions further reduced applications, until the law school was no longer a viable operation.[45]

A bevy of law schools closed their doors in the aftermath of the admissions crisis; long-standing non-profit law schools such as Valparaiso and Whittier; a new law school, Indiana Tech; as well as many of the for-profit law schools, including several of the InfiLaw schools—Arizona Summit and Charlotte Law School, and the Savannah campus of John Marshall Atlanta.[46] The drop in applicants came within the same ten-year period as increased oversight by the ABA on bar passage and standards designed to show law schools were meeting their duty to graduate students who could pass the bar exam within two years of graduation.[47]

Law schools could not unilaterally increase the number of applicants or increase the credentials of the applicants that were applying to their law school. More law schools created or enhanced their bar course offerings, but also explored curricular changes they believed would increase student academic success and bar passage.[48] Law schools are not known for their focus on effective

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Stopped Applying to Law School, ATLANTIC (Apr. 10, 2012), https://www.theatlantic.com/business/archive/2012/04/the-wrong-people-have-stopped-applying-to-law-school/255685/.

43. Katherine A. Austin et al., *Will I Pass the Bar Exam? Predicting Student Success Using LSAT Scores and Law School Performance*, 45 HOFSTRA L. REV. 753, 757 (2017).

44. Dorothy A. Brown, *Law Schools Are in a Death Spiral. Maybe Now They'll Finally Change*, WASH. POST (Mar. 9, 2015, 6:00 AM), https://www.washingtonpost.com/posteverything/wp/2015/03/09/law-schools-are-in-a-death-spiral-maybe-now-theyll-finally-change/; Stephen Dash, *How Law Schools Will Pull Out Of 'Death Spiral'*, FORBES (Nov. 3, 2015, 7:15 PM), https://www.forbes.com/sites/stephendash/2015/11/03/how-law-schools-will-pull-out-of-death-spiral/?sh=128a7705426d.

45. CLIFFORD WINSTON ET AL., TROUBLE AT THE BAR 44 (2021).

46. Hilary G. Escajeda, *Legal Education: A New Growth Vision Part I—The Issue: Sustainable Growth or Dead Cat Bounce? A Strategic Inflection Point Analysis*, 97 NEB. L. REV. 628, 662 (2019).

47. Karen Sloan, *ABA Eyes Tighter Bar-Passage Rule for Law Schools*, LEGAL INTELLIGENCER (May 3, 2013, 2:12 AM), https://www.law.com/thelegalintelligencer/almID/1367179336324/.

48. Linda Jellum & Emmeline Paulette Reeves, *Cool Data on A Hot Issue: Empirical Evidence That a Law School Bar Support Program Enhances Bar Performance*, 5 NEV. L.J.

pedagogy or employment of professionals with expertise in education, and law schools rarely hire consultants to help professors design curriculum to effectuate their concerns regarding bar passage. Law schools chose an ad-hoc curricular reform process led by people trained in law, not learning. Law review articles on the success, or failure, of mandating specific bar-tested subjects suggest law schools tried to tighten their graduation requirements.[49] And many law professors, sometimes at the behest of their deans or academic committees, sometimes of their own accord, decided to adopt closed-book exams.[50]

IV. STUDENT RESPONSE TO CURRICULAR CHANGES

Students' responses to the curricular changes implemented by law schools were not surprising; they relied on methods that had worked for them in the past. This was especially predictable because law schools did not engage in the rigorous training and re-education students required to understand how law school teaching and examination methods differ from undergraduate programs. However, unlike undergraduate students that rely on memorization and recitation for success, law schools asked students to do something novel and unexpected with their learning—develop higher-order thinking and problem-solving skills.[51] Law students were using outdated, broken study tools to tackle a new, complex intellectual problem without the proper support or guidance necessary to prepare them for the challenge.

646, 661–62 (2005); Mario W. Mainero, *We Should Not Rely on Commercial Bar Reviews to Do Our Job: Why Labor-Intensive Comprehensive Bar Examination Preparation Can and Should Be a Part of the Law School Mission*, 19 CHAP. L. REV. 545, 561 (2016).

49. Robert R. Kuehn & David R. Moss, *A Study of the Relationship Between Law School Coursework and Bar Exam Outcomes*, 68 J. LEGAL EDUC. 623, 624 (2019).

50. Donald H. Zeigler et al., *Curriculum Design and Bar Passage: New York Law School's Experience*, 59 J. LEGAL EDUC. 393, 398 (2010) (delineating instances of advocating for closed-book exams without empirical support); *see also* Marjorie A. Silver, *Commitment and Responsibility: Modeling and Teaching Professionalism Pervasively*, 14 WIDENER L.J. 329, 341, 341 n.29 (2005) (supporting open-book exams, but explaining that other professors adopt closed-book exams without empirical support).

51. *See infra* pt. IV.A.

A. Students Trust the Ineffective Study Methods They Used in Earlier Education

Closed-book exams seemed to be the logical, common-sense response to pressure to increase bar pass rates. The rationale behind the change was due to the nature of the bar exam; the bar exam is a closed-book exam, and therefore, students should get used to taking high-stress, high-stakes exams in law school to be better prepared for stress and time-pressure on the bar exam.[52] While this seems to be a logical response, in practice, the student response to closed-book exams defeats their usefulness. Closed-book exams increase pressure on students; however, there is no evidence that increasing pressure on students during their 1L year helps them prepare for the pressure they will experience on the bar exam.

More problematic is the fact that students do not necessarily know how to prepare for these exams.[53] Law schools, with minimal formative assessment, and little or no feedback, leave students to develop the skills they need to succeed on exams and on the bar exam on their own through the study techniques adopted to prepare for final exams, which are frequently the only graded assessment for a course.[54] Students who do not know how to prepare for law school exams, or how to build higher-order thinking skills, rely on ineffective and suboptimal methods of class preparation and study.[55] These methods do not build the higher-order thinking skills that are tested on exams and are critical to success on the bar exam.[56] Application, analysis, and synthesis of the law, as well as analogical reasoning and problem-solving, written in an organized, logical, and well-supported essay, are skills that need to be built over time, through continuous practice

52. *See* Sabrina DeFabritiis & Kathleen Elliott Vinson, *Under Pressure: How Incorporating Time-Pressured Performance Tests Prepares Students for the Bar Exam and Practice*, 122 W. VA. L. REV. 107, 121 (2019) ("Take-home exams or open-book exams do not replicate the bar exam or the ability to perform at a high level under stressful time pressures."). There is no empirical or pedagogical evidence to support this statement.

53. Benjamin V. Madison, III, *The Elephant in Law School Classrooms: Overuse of the Socratic Method as an Obstacle to Teaching Modern Law Students*, 85 U. DET. MERCY L. REV. 293, 319 (2008).

54. Rogelio A. Lasso, *Is Our Students Learning? Using Assessments to Measure and Improve Law School Learning and Performance*, 15 BARRY L. REV. 73, 79 (2010).

55. Kayla Morehead et al., *Instructor and Student Knowledge of Study Strategies*, 24 MEMORY 257, 257–58 (2016).

56. Elizabeth M. Bloom, *A Law School Game Changer: (Trans)formative Feedback*, 41 OHIO N.U. L. REV. 227, 228 (2015).

and feedback.[57] Closed-book exams require students to memorize blackletter law and case holdings as the first step in exam preparation.[58] However, students do not know how to prepare for exams, or what to prepare for, and without further instruction, they will stop at memorization.[59] When memorization competes with unfamiliar study methods, students favor memorization, a comfortable, well-established study habit.

Professors' mistaken beliefs about the usefulness of memorization add to this challenge. Memory is "privileged" within legal education.[60] Many of the assumptions associating memory with learning come from a different time: "[I]n modern legal education, the curricular links between memory, rhetoric, and the law are weak."[61] Professors, like many other people, confuse memorization as a learning technique and the product of effective studying. Memorization offers little on its own; it does not promote understanding, connection, or transfer.[62] Due to the recursive nature of studying, memorization should be the result, or product of, effective study methods, not the end goal of studying.

Contrary to the belief that memorizing law will lead to understanding, application, and transfer, memorization does not automatically encourage or assist in the development of higher-order thinking; memorization may be the first step, but more rigorous study methods are required to expand more advanced thinking skills.[63] Learning happens not by memorizing

57. Lasso, *supra* note 54, at 93; Brett A. Brosseit, *Charting the Course: An Empirically Based Theory of the Development of Critical Thinking in Law Students*, 26 ALB. L.J. SCI. & TECH. 143, 167 (2016); Renee Nicole Allen & Alicia R. Jackson, *Contemporary Teaching Strategies: Effectively Engaging Millennials Across the Curriculum*, 95 U. DET. MERCY L. REV. 1, 30 (2017). *See generally* Paula J. Manning, *Understanding the Impact of Inadequate Feedback: A Means to Reduce Law Student Psychological Distress, Increase Motivation, and Improve Learning Outcomes*, 43 CUMB. L. REV. 225 (2013); Phillip C. Kissam, *Lurching Towards the Millennium: The Law School, the Research University, and the Professional Reforms of Legal Education*, 60 OHIO ST. L.J. 1965, 1975 (1999).

58. Madison, *supra* note 53, at 319; Christos Theophilides & Mary Koutselini, *Study Behavior in the Closed-Book and the Open-Book Examination: A Comparative Analysis*, 6 EDUC. RSCH. & EVAL. 379, 390–91 (2000).

59. Sanne F.E. Rovers et al., *How and Why Do Students Use Learning Strategies? A Mixed Methods Study on Learning Strategies and Desirable Difficulties with Effective Strategy Users*, 9 FRONTIERS IN PSYCH. 1, 1–2 (2018).

60. Paul Maharg, *The Culture of the Mnemosyne: Open Book Assessment and the Theory and Practice of Legal Education*, 6 INT. J. LEGAL PRO. 219, 222 (1999).

61. *Id.* at 224.

62. Enamul Hoque, *Memorization: A Proven Method of Learning*, 22 INT'L J. APPLIED RSCH. 142, 143 (2018).

63. Maharg, *supra* note 60, at 222, 224.

information, but by interpreting information and using existing knowledge to construct meaning.[64] Recalling a piece of information for the purpose of using it on an exam does not mean that the student will later be able to "perform some kind of action" with this knowledge.[65] What are law professors seeking to do but ask students to "perform" application, analysis, and synthesis with their legal knowledge?

The lack of empirical study on assessment and learning in law schools makes it difficult to convince professors who insist on the efficacy of closed-book exams to prepare students for the bar exam, even in light of declining bar pass rates.[66] Professors complain about the quality of student work, but do not see their role in poor student performance.[67] Closed-book exams allow students to use the study techniques they believe are successful, because they have been successful in the past.[68] Most of the study techniques students have used in the past are successful when students are assessed on recall of specific facts, tested shortly after the study period, but ineffective at building the skills—analysis, analogical reasoning, synthesis—needed to succeed in law school.[69]

For matriculating first-year students, law school exams are a mystery.[70] Unless they enroll in a course or workshop on exam-taking, students assume law school exams will be structured and graded in the same manner as undergraduate exams. This information asymmetry, where students think exams are going to

64. *Id.* at 227–28.

65. *Id.* at 228.

66. Among common law countries, only the Commonwealth nations have invested in empirical study of open-book exams. Among civil-law countries, Denmark has engaged in rigorous examination of law school learning and testing practices. *Id.* at 222*; see also* Amanda Cahill-Ripley, *Innovative Methods of Assessment in the Law: The Value of Open-Book Exams as a Catalyst for Improving Teaching and Learning in Law School*, 49 LAW TCHR. 206, 207 (2015); Fleurie Nievelstein et al., *The Worked Example and Expertise Reversal Effect in Less Structured Tasks: Learning to Reason About Legal Cases*, 38 CONTEMP. EDUC. PSYCH. 118 (2013).

67. David Nadvorney, *Teaching Legal Reasoning Skills in Substantive Courses: A Practical View*, 5 CUNY L. REV. 109, 109–10 (2002). *See generally* Nancy Millich, *Building Blocks of Analysis: Using Simple "Sesame Street Skills" and Sophisticated Educational Learning Theories in Teaching a Seminar in Legal Analysis and Writing*, 34 SANTA CLARA L. REV. 1127 (1994).

68. Jennifer E. Spreng, *Spirals and Schemas: How Integrated Courses in Law Schools Create Higher-Order Thinkers and Problem Solvers*, 37 U. LAVERNE L. REV. 37, 39 (2015).

69. *See* Brian Sites, *Learning Theory and the Law: Spaced Retrieval and the Law School Curriculum*, 43 LAW & PSYCH. REV. 99, 118 (2019).

70. Joan M. Rocklin, *Exam-Writing Instruction in a Classroom Near You: Why It Should Be Done and How to Do It*, 22 LEGAL WRITING 189, 195–96 (2018).

be an extension of past exam formats, and professors know exams are meant to test higher-order thinking and problem-solving skills, leaves a significant gap between students' established study methods, and the study methods they need to master in order to succeed in law school.[71] Few students take advantage of the opportunity to review their final exams with their professors, and many professors do not know how to review exams with students in a way that helps them understand why they scored poorly.[72] Students who do not know why they earned their scores on final exams are left to infer that it was a failure of memorization, rather than a failure to develop the skills tested on exams.[73] The result of student focus on memorization and the use of suboptimal study methods throughout law school is that students are underprepared for the bar exam, a comprehensive exam that expects proficiency in higher-order thinking and problem-solving skills as the foundation for bar preparation.[74]

B. Effective Study Methods Students Should Know and Trust, But Do Not

The challenge with moving students from memorization to life-long learning skills is habit and fear. Learning anything new is hard.[75] Law school learning is particularly difficult; unlike prior learning, law school asks students to learn new, complex substantive material—the law—while asking them to master a new way of thinking.[76] Additionally, students are expected to express their understanding of new substantive material in an

71. Steven Friedland, *A Critical Inquiry into the Traditional Uses of Law School Evaluation*, 23 PACE L. REV. 147, 165–67 (2002).

72. Richard Henry Seamon, *Lightening and Enlightening Exam Conferences*, 56 J. LEGAL EDUC. 122, 123 (2006); Cassandra L. Hill & Katherine T. Vukadin, *Now I See: Redefining the Post-Grade Student Conference as Process and Substance Assessment*, 54 HOW. L.J. 1, 4 (2010).

73. Spreng, *supra* note 68, at 39.

74. DeFabritiis & Vinson, *supra* note 52, at 119; Kirsten M. Winek, *Writing Like a Lawyer: How Law Student Involvement Affects Self-Reported Gains in Writing Skills in Law School*, 69 J. LEGAL EDUC. 568, 583–84 (2020); Debra Moss Vollweiler, *Don't Panic! The Hitchhiker's Guide to Learning Outcomes: Eight Ways to Make Them More Than (Mostly) Harmless*, 44 U. DAYTON L. REV. 17, 47 (2018).

75. YANA WEINSTEIN & MEGAN SUMERACKI, UNDERSTANDING HOW WE LEARN: A VISUAL GUIDE 24 (2019).

76. Fleurie Nievelstein et al., *Instructional Support for Novice Law Students: Reducing Search Processes and Explaining Concepts in Cases*, 25 APPLIED COGNITIVE PSYCH. 408, 408 (2010) ("Research has shown, however, that many law students and especially novices, experience serious difficulties with reasoning about cases.").

unfamiliar and decontextualized discourse community, far removed from the formalities of the undergraduate or even graduate writing communities where many of them succeeded in the past.[77] The cognitive burden on a new law student is substantial.[78] The emotional challenges are no less substantial than the academic struggle; most law students have spent the majority of their lives in school, and have excelled in the school environment.[79] Law school grading practices mean that ninety percent of the class will not be receiving the positive feedback and end-of-term grades they are used to receiving.[80]

Despite the challenges posed by law school learning, most law schools do not spend considerable time teaching law students how to learn.[81] Students start law school without the metacognitive, problem-solving, or thinking skills necessary to learn how to develop their knowledge in law school.[82] Academic Success or Academic Support Programs ("ASPs") are traditionally led by lawyer-teachers with expertise in teaching and learning, to work with students who struggle with law school academics.[83] Some ASPs have expanded to include lessons during orientation, first-year workshops, and a select few ASPs offer semester-long courses to help all students, not just those who show academic deficiencies.[84] However, with the exception of orientation, most of these programs are voluntary or ungraded; students, especially those who feel overextended and overwhelmed, have little

77. Teri A. McMurty-Chubb, *Towards a Disciplinary Pedagogy for Legal Education*, 1 SAVANNAH L. REV. 69, 70 (2014).

78. Terri L. Enns & Monte Smith, *Take a (Cognitive) Load Off: Creating Space to Allow First-Year Legal Writing Students to Focus on Analytical and Writing Processes*, 20 LEGAL WRITING 109, 110 (2015).

79. Kathryne M. Young, *Understanding the Social and Cognitive Processes in Law School That Create Unhealthy Lawyers*, 89 FORDHAM L. REV. 2575, 2576 (2021).

80. Leah M. Christensen, *Enhancing Law School Success: A Study of Goal Orientations, Academic Achievement and the Declining Self-Efficacy of Our Law Students*, 33 LAW & PSYCH. REV. 57, 79 (2009).

81. Jennifer M. Cooper & Regan A. R. Gurung, *Smarter Law Study Habits: An Empirical Analysis of Law Learning Strategies and Relationship with Law GPA*, 62 ST. LOUIS U. L.J. 361, 363 (2018) (noting that most law schools introduce case briefing and reading skills in orientation, and some offer workshops on study skills, but few provide the intensive, research-based instruction in learning and study techniques).

82. Sarah J. Schendel, *What You Don't Know (Can Hurt You): Using Exam Wrappers to Foster Self-Assessment Skills in Law Students*, 40 PACE L. REV. 154, 158 (2020).

83. Adam G. Todd, *Academic Support Programs: Effective Support Through a Systemic Approach*, 38 GONZ. L. REV. 187, 192–93 (2002).

84. Susan D. Landrum, *Drawing Inspiration from the Flipped Classroom Model: An Integrated Approach to Academic Support for the Academically Underprepared Law Student*, 53 DUQ. L. REV. 245, 261–62 (2015).

incentive to attend a voluntary workshop or invest time and energy into a course that will not directly affect their grade.[85] Voluntary ASP workshops also carry with them the stigma that they are only for students who are struggling.[86] In reality, most directors of ASPs will tell you the students who are most likely to attend these skills sessions are high-achieving students.[87] The current law school environment does not support students who need assistance but fear being labeled as dumb by their classmates.[88] Few ASPs have the means to reach out to students who are struggling academically but do not know they are struggling until they see their first-semester grades.[89]

Even high-achieving students do not always recognize their lack of understanding in how to learn; matriculating 1L students come to law school with the expectation that they know how to study. They employ the study strategies that have worked in primary and high school, as well as their undergraduate education, and apply those strategies to law school learning.[90] However, the learning strategies that felt successful in prior learning environments are not adequate for law school learning.[91] It is well documented in books, law review articles, and popular culture that undergraduate education is less rigorous, resulting in students who do not show substantial, or even minimal, growth in academic skills over four years of undergraduate education.[92] Students rely

85. Rachel Casper, *The Full Weight of Law School: Stress on Law Students is Different*, LCL (Jan. 18, 2019), https://www.lclma.org/2019/01/18/the-full-weight-of-law-school-stress-on-law-students-is-different/.

86. Louis N. Schulze Jr., *Alternative Justifications for Academic Support II: How "Academic Support Across the Curriculum" Helps Meet the Goals of the Carnegie Report and Best Practices*, 40 CAP. U. L. REV. 1, 26 (2012) [hereinafter *Alternative Justifications for Academic Support II*].

87. SUSAN A. AMBROSE ET AL., HOW LEARNING WORKS: 7 RESEARCH-BASED PRINCIPLES FOR SMART TEACHING 200–01 (1st ed. 2010).

88. See *id.* at 71 for a brief discussion of performance goals.

89. Directors of ASPs can know shortly after midterms which students will struggle due to fundamental issues with logic and writing. It is not just low midterm grades that give rise to their concern; directors of ASP are frequently in contact with professors of legal writing, who also spot the errors in logic and deficiencies in writing skills before students understand they are at risk of academic failure. There is a qualitative difference between poor exam performance due to lack of preparation, and poor exam performance due to fundamental deficits in logical reasoning and writing skills. *See, e.g.*, *Alternative Justifications for Academic Support II*, *supra* note 86; AMBROSE ET AL., *supra* note 87.

90. Cooper & Gurung, *supra* note 81, at 368–69.

91. Spreng, *supra* note 68, at 39.

92. *See* RICHARD ARUM & JOSIPA ROKSA, ACADEMICALLY ADRIFT: LIMITED LEARNING ON COLLEGE CAMPUSES (2011); Philip Babcock & Mindy Marks, *The Falling Time Cost of College: Evidence from Half a Century of Time Use Data*, 93 REV. ECON. & STAT. 468, 468

on strategies developed to master simpler material, very often tested through multiple choice exams that rely on memorization.[93] Matriculating students also rely on their own beliefs about how they learn—beliefs that are not based in cognitive science or research on learning.[94] Faulty intuition about methods of learning can cause students to mistake comfort for learning.[95] Confirmation bias reaffirms their faulty beliefs, causing students to rely on their inaccurate intuition, supported by limited, cherry-picked evidence, to confirm their use of ineffective study strategies.[96]

Mistaking comfort for learning is perhaps the most challenging misapprehension students bring with them to law school.[97] Students tend to be resistant to study techniques that are most effective for long-term learning and retention.[98] Memorization through reading, rereading, highlighting, and cramming are comforting, and lead to a false sense of learning and retention.[99] These common methods of study are notoriously poor methods to prepare for assessment.[100]

(2011); Jacques Steinberg, *How Much Do College Students Learn, and Study?*, N.Y. TIMES (Jan. 17, 2011, 11:59 PM), http://nyti.ms/1fWZIS5; *Wabash National Study Design*, CTR. OF INQUIRY AT WABASH COLL., https://centerofinquiry.org/wabash-national-study-study-design/ (last visited Aug. 31, 2024); Susan Stuart & Ruth Vance, *Bringing a Knife to the Gunfight: The Academically Underprepared Law Student & Legal Education Reform*, 48 VAL. U. L. REV. 41, 55 (2013).

93. Steven C. Funk & K. Laurie Dickson, *Multiple-Choice and Short-Answer Exam Performance in a College Classroom*, 38 TEACHING PSYCH. 273, 275 (2011); Cheryl A. Melovitz Vasan et al., *Analysis of Testing with Multiple Choice Versus Open-Ended Questions: Outcome-Based Observations in an Anatomy Course*, 11 ANATOMICAL SCI. EDUC. 254, 254–55 (2018).

94. For an example of a commonly held, erroneous belief, see research on learning styles. Most students still believe that they have a particular learning style, and when that learning style is employed to learn novel information, they understand and retain the material better than if they used a less familiar learning style. However, learning styles are not based on research or science. Research actually shows the opposite of the commonly held belief is true; students learn better when they have difficulty decoding the information. *See* Paul A. Kirschner & Jeroen J.G. van Merriënboer, *Do Learners Really Know Best? Urban Legends in Education*, 48 EDUC. PSYCH. 169, 174–76 (2013); Connor Diemand-Yauman et al., *Fortune Favors the Bold (and the Italicized): Effects of Disfluency on Educational Outcomes*, 118 COGNITION 111, 111 (2011).

95. WEINSTEIN & SUMERACKI, *supra* note 75, at 23.

96. *Id.*

97. See Benedict Carey, *Come On, I Thought I Knew That!*, N.Y. TIMES (Apr. 18, 2011) https://www.nytimes.com/2011/04/19/health/19mind.html, for a summary of educational research previously discussed in this Article.

98. Jason Geller et al., *Study Strategies and Beliefs About Learning as a Function of Academic Achievement and Achievement Goals*, 26 MEMORY 683, 685 (2018).

99. Aimee Callender & Mark A. McDaniel, *The Limited Benefits of Rereading Educational Texts*, 34 CONTEMP. EDUC. PSYCH. 30, 38 (2009).

100. Cooper & Gurung, *supra* note 81, at 364.

Students who do not know how to study also confuse class preparation with study methods. Close or critical reading is essential for class preparation, but close reading alone is not a study method that will adequately prepare students for exams.[101] Most law students have minimal experience with close or critical reading before they begin their 1L year.[102] Unlike a novel or text, cases must be read slowly, paying attention to word choice, punctuation, and organization. To be prepared for class, students need to read and reread cases to fully appreciate which facts are relevant, how the law is applied to those facts, what precedent and policies were applied, and any limitations on application of the law that are noted by the factfinder.[103]

However, close reading and rereading to prepare for class are not the same as studying. Students need to change their methods in order to move from learning the law to applying their learning on exams. Because law schools do not teach students how to study, students are left unassisted as they struggle to contextualize material, as well as employ new skills to demonstrate their understanding. Metacognition, or thinking about thinking, requires some degree of self-awareness on the part of the student to assess whether they are understanding the material; many students do not know when they are misunderstanding what they learn.[104] The lack of feedback in legal learning leaves them without an external monitor or sufficient prior knowledge and mental schemata to assess their understanding.[105] Students are left to self-regulate their learning, or "plan, set goals, organize, self-monitor, and self-evaluate. . . . [T]hey self-instruct . . . and self-reinforce"[106] without knowing whether their understanding is

101. *Id.* at 389; Morehead et al., *supra* note 55, at 267.

102. Carolyn V. Williams, *#CriticalReading #WickedProblem*, 44 S. ILL. U. L.J. 179, 188 (2020).

103. JANE BLOOM GRISÉ, CRITICAL READING FOR SUCCESS IN LAW SCHOOL AND BEYOND 10 (2017).

104. Cheryl B. Preston et al., *Teaching "Thinking Like A Lawyer": Metacognition and Law Students*, 2014 B.Y.U. L. REV. 1053, 1071 (2014) ("[L]aw school applicants who have received high undergraduate grades . . . may not have enough to rise to the top in law school, let alone in practice. . . . Highly qualified students have the natural talent, but their capabilities may not be realized without focused instructional intervention.").

105. Traci Sitzmann et al., *Self-Assessment of Knowledge: A Cognitive Learning or Affective Measure?*, 9 ACAD. MGMT. LEARN. & EDUC. 169, 172 (2010); Jaime Alison Lee, *From Socrates to Selfies: Legal Education and the Metacognitive Revolution*, 12 DREXEL L. REV. 227, 269–72 (2020) (discussing the role of feedback and effective metacognition).

106. Barry J. Zimmerman, *Self-Regulated Learning and Academic Achievement: An Overview*, 25 EDUC. PSYCH. 3, 4–5 (1990).

correct, and without adequate feedback to assess their understanding. Studying and preparing for exams requires a self-regulated learner with the metacognitive skills to assess what they do not know, or to know where to find tools to help them assess their learning. Few matriculating law students have the knowledge or metacognitive skills to assess their understanding.[107]

Short of whether an exam will be an essay, multiple-choice, or a mix of both formats, students do not know how they will be assessed in law school, so they do not know why prior methods are inadequate, and why the skills they mastered for class preparation are not skills that will be adequate for exam preparation. Reading and rereading cases feels like self-instruction—after all, it is the strategy they have used to prepare for class.[108] Reading and rereading cases does not help students see how multiple cases work together to shape a body of law, and it does not help students see which law should be applied when two competing laws or interpretations seem relevant.[109] Reading and rereading are the first steps in learning; however, reading and rereading do not produce analysis or the ability to "break[] down information into parts, realizing how those parts relate to each other, and recognizing which parts are significant," or help students synthesize multiple cases into a coherent theory or understanding of the law.[110] For instance, relying on rereading by itself ignores the crucial stage of "*putting together* elements and parts 'in such a way as to constitute a pattern or structure not clearly there before,' which usually occurs by combining the information with new material."[111] Students do not come to law school equipped with an understanding of how to build their analytical abilities or how to synthesize large amounts of material; few college majors require

107. Schendel, *supra* note 82, at 158.

108. *See* Elizabeth Ruiz Frost, *Feedback Distortion: The Shortcomings of Model Answers as Formative Feedback*, 65 J. LEGAL EDUC. 938, 951–52 (2016) (noting that rereading a term or sentence creates a perceptual fluency that is not matched by an internalized understanding); Catherine Martin Christopher, *Normalizing Struggle*, 73 ARK. L. REV. 27, 48 (2020).

109. RICHARD MICHAEL FISCHL & JEREMY PAUL, GETTING TO MAYBE 55–66, 87–105 (1999).

110. Michael T. Gibson, *A Critique of Best Practices in Legal Education: Five Things All Law Professors Should Know*, 42 U. BALT. L. REV. 1, 8 (2012).

111. *Id.* (citing BENJAMIN S. BLOOM ET AL., TAXONOMY OF EDUCATIONAL OBJECTIVES: THE CLASSIFICATION OF EDUCATIONAL GOALS: HANDBOOK I: COGNITIVE DOMAIN (Benjamin S. Bloom ed., 1956)).

the application of what is learned in class on their exams because recall is usually sufficient.[112]

Reading and rereading cases, class notes, and case briefs, are not the only mistakes students make when they study for exams. Students sometimes use techniques that mimic active learning, but do not produce the higher-order thinking skills required for success in law school. Flashcards can be a useful and active manner of self-testing.[113] However, many law students do not use flashcards in a way that produces higher-order thinking skills or durable learning.[114] Students frequently use flashcards to focus on memorization. They will write a fact, such as a case name, on one side of a card and put a short summary of the case on the other side, or they will name a blackletter law and write the definition on the back of the card. This type of memorization by flashcard is helpful when the assessment focuses on recitation of facts, such as the geologic formations in the Appalachian Mountains.

Unlike a multiple-choice exam in Geology 101, memorization is only the first step in studying for law school exams; what is memorized must be applied, analyzed, and synthesized with other cases and policy in order to be useful on a traditional, issue-spotting essay exam.[115] Use of flashcards to memorize blackletter law and case holdings gives the illusion of learning, but it is not the learning that will help students succeed on exams.[116] By relying on flashcards, students do not do the intellectual heavy lifting required for success on exams; they are not testing their ability to organize their thoughts, prioritize information, select and apply the appropriate law to the relevant facts, or judge which information is relevant to the analysis.[117] Like reading and rereading, the use of flashcards feels like progress. Law school exams evoke feelings of disorientation and fear;[118] feeling like

112. Hillary Burgess, *Deepening the Discourse Using the Legal Mind's Eye: Lessons from Neuroscience and Psychology That Optimize Law School Learning*, 29 QUINNIPIAC L. REV. 1, 5 (2011).

113. Patrick Barry, *Editing and Interleaving,* 18 LEGAL COMM. & RHETORIC 59, 61 (2021).

114. Cooper & Gurung, *supra* note 81, at 390–91.

115. Christopher, *supra* note 108, at 51.

116. Cooper & Gurung, *supra* note 81, at 364.

117. See AMBROSE ET AL., *supra* note 87, at 72–73, for a discussion of work-avoidant goals.

118. Alan J. Oxford, II1, *Inception: The Exam Dream Is Real*, 120 PENN ST. L. REV. PENN STATIM 1, 19–20 (2015); Harvey Gilmore, *Misadventures of a Law School Misfit*, 51 DUQ. L. REV. 191, 199 (2013).

progress is being made through memorization by flashcards is comforting and reassuring.

Along with the creation and use of flashcards, another student-favored study method is cramming, also known as massed practice. Massed practice is reassuring because it helps students retain information in the short term.[119] Massed practice usually appears during reading week, when students may stay up for twenty-four or forty-eight hours before an exam to finish their outlines and master their flash cards. These methods, besides being a point of pride amongst competitive or gunner peers, may be rewarded with adequate recall when they reach the final exam.[120] Using reading week to cram everything that needs to be memorized, and only focusing on one class immediately before the final exam in that area, are tried-and-true methods of law students across the country.[121] Because massed practice can help students retain learning in the short-term, students feel it works. The problem with massed practice is that it does not produce durable learning; what is crammed is quickly forgotten.[122] Unlike an English major cramming the names of rock formations for a Geology course, what is learned in law school must be retained. Specifically, the first year of law school not only forms the foundation for learning in the 2L and 3L years, but also is the foundation for success on the bar exam.[123]

Students do not know what to study, or how to study, and unfortunately, effective study techniques are neither intuitive nor comforting. Empirically-grounded study techniques feel ineffective and distressing because they rely on mistakes, struggling, and forgetting to create new understanding and build on prior learning.[124] Students cannot see how their chosen study methods are self-defeating, because most law schools offer minimal or no feedback on student performance until the end of the year.[125]

119. Elizabeth Adamo Usman, *Making Legal Education Stick: Using Cognitive Science to Foster Long-Term Learning in the Legal Writing Classroom*, 29 GEO. J. LEGAL. ETHICS 355, 365–66 (2016).

120. Andrew Ricke, *A Love-Hate Relationship*, 77 J. KAN. BAR ASS'N 12, 12 (2008).

121. *See* Louis N. Schulze, Jr., *Using Science to Build Better Learners: One School's Successful Efforts to Raise Its Bar Passage Rates in an Era of Decline*, 68 J. LEGAL EDUC. 230, 242 (2019) [hereinafter *Using Science to Build Better Learners*].

122. Allie Robbins, *Everything I Know About Teaching Was Reinforced by Auditing Remote Kindergarten*, 16 FIU L. REV. 159, 163 (2021).

123. Sabrina DeFabritiis, *1L Is the New Bar Prep*, 51 CREIGHTON L. REV. 37, 38 (2017).

124. WEINSTEIN & SUMERACKI, *supra* note 75, at 84.

125. Brosseit, *supra* note 57, at 167.

Contrary to humans' intuitive sense of learning, learning and forgetting are symbiotic.[126] Students allowing themselves to forget, and forcing recall over an extended period of time, produces greater long-term learning gains than crammed or massed studying.[127]

The Ebbinghaus Forgetting Curve, first formulated by Hermann Ebbinghaus in 1885, describes the loss of memory over a discrete period of time, and "charts the rate at which newly learned information fades from memory."[128] A successful long-term study approach, termed spaced repetition or spaced learning, relies on forgetting in order to learn.[129] This technique, reviewing material over time and building understanding through recall and retrieval, neither feels correct nor familiar.[130] But this is the challenge facing law students: what *feels* correct is not what is most effective. Spaced practice, or spaced learning, focuses on the timing of study, but it is also used with other techniques to build durable learning.

Spaced practice works with the testing effect, or learning produced from quizzes that act as formative assessment.[131] The most effective way to study material over time is by testing learning over periodic intervals (spaced repetition), and restudying material that produced errors on the assessment.[132] Student self-testing, sometimes referred to as quizzing for self-assessment, can take a variety of forms. CALI quizzes, quizzes provided by casebook publishers, Glannon Guides, and a variety of commercial workbooks provide students with adequate means to test their learning before and after they have studied the material assigned for class.[133] Quizzing is a method that works best when implemented throughout the learning and study process; quizzing before learning can prime students to look for answers as they

126. Tenielle Fordyce-Ruff, *Research Across the Curriculum: Using Cognitive Science to Answer the Call for Better Legal Research Instruction*, 125 DICK. L. REV. 1, 40–41 (2020).

127. Gabriel H. Teninbaum, *Spaced Repetition: A Method for Learning More Law in Less Time*, 17 J. HIGH TECH. L. 273, 282–86 (2017).

128. BENEDICT CAREY, HOW WE LEARN 25 (2014).

129. Teninbaum, *supra* note 126, at 276–79.

130. *Using Science to Build Better Learners*, *supra* note 120, at 242–43.

131. Deborah L. Borman & Catherine Haras, *Something Borrowed: Interdisciplinary Strategies for Legal Education*, 68 J. LEGAL EDUC. 357, 372 (2019) ("After taking a test, students who spend more time restudying material they missed learn more from the testing process than do peers who study and restudy material without being tested.").

132. *Id.*

133. Cooper & Gurung, *supra* note 81, at 393.

read, and testing after learning acts as a study tool to elicit areas of misunderstanding and direct questions for TA reviews and meetings with professors during office hours.[134] By quizzing throughout the learning and study period, students are also implementing spaced practice.

Quizzing may be uncomfortable for students because it does not reaffirm competence, but the most uncomfortable, empirically-grounded study method involves mixing subjects areas, topics, and problems during study sessions.[135] Interleaving study "involves solving several related problems. . . . This approach helps the learner to choose the correct strategy to solve a problem and helps them see the links, similarities, and differences between problem states."[136] An example of interleaved study would be asking students to explain the logic that underpins both *White v. Samsung Electronics America, Inc.* and *Moore v. Regents of the University of California*; both cases involve the value of the human body, but they are introduced under different topic headings at different points in the semester.[137] Interleaved study is a method of developing the higher-order thinking skills, such as synthesis or "[i]ntegration of application, understanding and knowledge" that students need to master during their law school careers.[138] Interleaving works by creating multiple pathways to knowledge; multiple pathways create the sort of big picture understanding that also forms the basis of learning in students' 2L and 3L years.[139]

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134. James McGrath, *Planning Your Class to Take Advantage of Highly Effective Learning Techniques,* 95 U. DET. MERCY L. REV. 153, 172–73 (2018); Ernesto Panadero et al., *Effects of Self-Assessment on Self-Regulated Learning and Self-Efficacy: Four Meta-Analyses*, 22 EDUC. RSCH. REV. 74, 77 (2017) ("[S]elf-assessment does not only affect the self-reflection phase, but also the forethought phase (for instance when providing the students with assessment criteria, so that they are able to set realistic goals for the task) and the performance phase (since monitoring can be done with more accuracy, as there is a clearer understanding of the final product/learning outcome)." (citations omitted)).

135. Cyrus A. Pumilia et al., *An Evidence-Based Guide for Medical Students: How to Optimize the Use of Expanded-Retrieval Platforms*, 12 CUREUS 1, 5 (2020).

136. PAUL A. KIRSCHNER & CARL HENDRICK, HOW LEARNING HAPPENS 18 (2020).

137. White v. Samsung Elecs. Am., Inc., 971 F.2d 1395, 1396 (9th Cir. 1992), *as amended* (Aug. 19, 1992); Moore v. Regents of Univ. of Cal., 793 P.2d 479, 480 (Cal. 1990).

138. Robert Horner et al., *How Challenging? Using Bloom's Taxonomy to Assess Learning Objectives in a Degree Completion Program*, 2 J. COLL. TEACHING & LEARNING 47, 51 (2005).

139. Rajat Saxena et al., *Learning in Deep Neural Networks and Brains with Similarity-Weighted Interleaved Learning*, 119 PNAS 1, 10 (2022); Mark Graham & Bryan Adamson, *Law Students' Undergraduate Major: Implications for Law School Academic Support Programs (ASPs)*, 69 UMKC L. REV. 533, 546 (2001).

Spaced learning, interleaving areas of study, and self-testing before and during learning are not the only empirically-grounded methods of learning and study, although they are the methods most likely to lead to deep learning of subject knowledge, and most importantly, development of higher-order thinking and problem-solving skills law students need to succeed throughout law school, the bar exam, and practice.[140] All study methods that lead to durable learning rely on students making and correcting their mistakes in understanding and application of the law.[141] Mistakes facilitate learning, but focusing on mistakes in order to learn feels intuitively wrong.[142] This not only offends an intuitive sense of learning, but also fights against the tide of modern culture, where students do not want to be perceived, by peers, professors, parents, or themselves, as prone to making mistakes while learning.[143] Because emotion is as important in learning as any effective study technique, students will avoid study techniques that make them feel less intelligent or adept than their peers.[144] Using testing and focusing on restudying areas or topics where learning is weakest

140. Other empirically-grounded methods of learning, such as elaboration, dual-coding, and concrete examples, were left out of the discussion because they are more helpful in building initial learning of course material than higher-order thinking and problem-solving skills through study. These methods are very helpful to instructors looking to build students thinking and reasoning skills during classroom instruction and course reading, but outside the scope of an article on why open-book exams encourage study habits that build higher-order thinking and problem-solving skills necessary for success on the bar exam. For more information on elaboration, see Julian Roelle & Matthias Nückles, *Generative Learning vs. Retrieval Practice in Learning from Text: The Cohesion and Elaboration of Text Matters*, 111 J. EDUC. PSYCH. 1341, 1342 (2019); for information on dual-coding, see generally Richard E. Mayer & Valerie K. Sims, *For Whom Is a Picture Worth a Thousand Words? Extensions of a Dual-Coding Theory of Multimedia Learning*, 86 J. EDUC. PSYCH. 389 (1994); for more information on concrete examples, see generally Xuesong Zhang, *Enhancing Teaching of Computer Organization Through Concrete Examples and Laboratory Experiences*, IEEE XPLORE 1357 (2009).

141. Jacqueline P. Leighton et al., *Measuring Preservice Teachers' Attitudes Towards Mistakes in Learning Environments*, 25 LEARNING ENV'TS RSCH. 287, 288–89 (2022); Cooper & Gurung, *supra* note 81, at 370.

142. *See generally* Katharina Loibl & Timo Leuders, *How to Make Failure Productive: Fostering Learning from Errors Through Elaboration Prompts*, 62 LEARNING & INSTRUCTION 1 (2019) (discussing how students prompted to compare erroneous solution attempts to correct solutions significantly outperformed their peers at post-test).

143. Christopher, *supra* note 108, at 32; Cooper & Gurung, *supra* note 81, at 394.

144. Mary Helen Immordino-Yang et al., *The Brain Basis for Integrated Social, Emotional, and Academic Development*, THE ASPEN INST. 13 (Sept. 20, 2018), https://www.aspeninstitute.org/publications/the-brain-basis-for-integrated-social-emotional-and-academic-development/ ("Stress from threats to emotional safety and feelings of belonging, such as stereotype threat, influences a person's underlying physiology and neural functioning, robbing a person of working memory resources. Such identity-related stress impacts cognitive performance in the short term.").

builds durable learning, but students must move past their bias against novel methodologies that feel harmful and ineffective.

Not all traditional law school study methods are ineffective or inadequate. Along with empirically grounded learning and study methods that feel uncomfortable and odd, students can use more traditional study methods to build higher-order thinking, problem-solving skills, and durable learning.[145] Learning built across the semester can be consolidated through a traditional law school study tool: the outline or course summary.[146] The outline or course summary is the tool that focuses student-thinking on predicting the exam content and structure, and supports self-regulated learning by elucidating student weaknesses that need additional attention. Outlining is a tool of spaced study; students should periodically update their outlines, starting from the beginning each time, and reviewing their prior learning, adding connections between earlier topics and what they are currently studying, and organizing their content by predicting what they need to know on exams.[147] Outlining is also a tool that utilizes interleaving; students should move between two or more outlines each week.[148]

Outlining requires elaboration; elaboration "involves turning facts to be learned into 'why' types of questions and then answering them."[149] When outlining, learning needs to be expanded, connected to prior learning, and analogized between cases and concepts through asking "why" questions.[150] Effective outlining creates new learning through analysis and synthesis of case briefs and class notes, which builds higher-order thinking skills through writing. Studies at the K-12 level have demonstrated a relationship between high-quality writing tasks—like outlining—and meeting learning outcomes.[151] Cognitively

145. Cooper & Gurung, *supra* note 81, at 368–69.

146. *Using Science to Build Better Learners*, *supra* note 120, at 233–34.

147. Jennifer M. Cooper, *Smarter Law Learning: Using Cognitive Science to Maximize Law Learning*, 44 CAP. U. L. REV. 551, 587–88 (2016).

148. *Using Science to Build Better Learners*, *supra* note 120, at 233.

149. McGrath, *supra* note 133, at 177.

150. E. Scott Fruehwald, *Bringing Legal Education Reform into the First Year: A New Type of Torts Text*, 50 J. MARSHALL L. REV. 713, 723–24 (2017) (discussing elaborative interrogation, which is a technique that should be used as students build outlines).

151. Richard Correnti et al., *Combining Multiple Measures of Students' Opportunities to Develop Analytic, Text-Based Writing Skills*, 17 EDUC. ASSESSMENT 132, 134 (2012) (citing Lindsay Clare Matsumara et al., *Measuring Instructional Quality in Accountability Systems: Classroom Assignments and Student Achievement*, 8 EDUC. ASSESSMENT 207 (2002)).

demanding tasks that ask students to interpret, analyze, synthesize, and evaluate information, instead of recalling facts, are predictive of student scores on standardized tests of reading.[152] While these studies were performed at lower levels of education, the outcomes can be extrapolated to law school learning and bar exam success; by spending more time on cognitively demanding writing tasks, like outlining, students are more likely to succeed on the bar exam, a test that requires a high level of reading speed and fluency.[153]

Outlining is not the only traditional study technique that is worth students' time. While outlining is the final product, end-of-term practice exams consolidate learning, test understanding, and measure progress. Using practice exams at the end of the semester or course period is different from self-testing discrete areas of law throughout the semester.[154] Both employ the testing effect in order to effectuate learning, but practice exams expand assessment beyond recall and focused study; practice exams also assess logical thinking, problem-solving, and organization.[155] By reading week, students should be practicing in the same manner that they will be tested. There are learning benefits when "final testing uses the same procedure used during practice testing."[156] Research suggests that the processing that occurs during the practice tests primes, or prepares, learners for the final test.[157] This is a key distinction between end-of-term practice testing and using quizzing before and during learning to enhance study. While quizzing during learning helps students with focus and recall, practice testing in the same manner as the final test facilitates processing, so students pre-think and pre-plan their exam approach before taking the exam.[158]

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152. *See* Correnti et al., *supra* note 150, at 134.

153. William D. Henderson, *The LSAT, Law School Exams, and Meritocracy: The Surprising and Undertheorized Role of Test-Taking Speed*, 82 TEX. L. REV. 975, 996 (2004); Kif Augustine-Adams et al., *Speed Matters*, 61 HOW. L.J. 239, 245 (2018).

154. Fruehwald, *supra* note 149, at 722.

155. Andrea A. Curcio et al., *Does Practice Make Perfect? An Empirical Examination of the Impact of Practice Essays on Essay Exam Performance*, 35 FLA. ST. U. L. REV. 271, 299 (2008).

156. Cody W. Polack & Ralph R. Miller, *Testing Improves Performance as Well as Assesses Learning: A Review of the Testing Effect with Implications for Models of Learning*, 48 J. EXPERIMENTAL PSYCH. 222, 226 (2022).

157. Curcio et al., *supra* note 154, at 279.

158. Polack & Miller, *supra* note 155, at 226.

Effective study techniques that are critical to success on exams are also critical to success on the bar exam.[159] Effective study throughout law school builds durable, long-term understanding of foundational legal concepts, as well as skill in the art of thinking and problem-solving. The bar study period asks law school graduates to re-learn massive amounts of blackletter law over a short period of time.[160] The assessment methods on the bar exam, including the upcoming NextGen exam, mix subject areas and concepts throughout multiple choice questions and essay prompts, demonstrating the importance of shifting thinking quickly, a skill developed through interleaved study.[161]

Even when the utility of effective study methods is taught to incoming law students, law school professionals are swimming against a strong tide, especially when students will be assessed through closed-book exams. Law school professionals need to convince new students that the comforting, yet ineffective, study habits will not lead to the success they have experienced in prior education and, in fact, risk their academic progress.[162] Open-book exams, particularly limited open-book exams, support the transition to more effective methods of learning because students, if informed of the type of assessment that will measure their learning, know factual recall is not what will be tested on an open-book or limited open-book exam. If memorization is a crutch that undermines student adoption of effective study techniques and development of higher-order thinking skills, open-book exams remove that support.

C. Overcoming Student Discomfort by Normalizing Struggle

One of the primary challenges with encouraging effective study skills is the belief that successful learning should be effortless. This belief has deep roots in psychology; students believe legal learning should be effortless, the way "biologically primary"

159. Brian Sites, *Informed Studying Through Predictive Modeling: An MBE Regression Analysis of Bar Preparation and Curriculum Assessments*, 39 QUINNIPIAC L. REV. 461, 468–69 (2021).

160. *Id.* at 463.

161. *NextGen Exam Sample Questions*, NAT'L CONF. BAR EXAM'RS, https://nextgenbarexam.ncbex.org/nextgen-sample-questions/ (last visited Aug. 17, 2024).

162. Paul T. Wangerin, *The Problem of Parochialism in Legal Education*, 5 S. CAL. INTERDISC. L.J. 441, 453 (1997).

learning, such as speaking, is effortless.[163] But legal learning is secondary; it requires "significant effort."[164] Adding to this challenge is the fact that effective study skills are counterintuitive. Effective study strategies cannot be made easy and pleasant; the success of these methods lies in their difficulty.[165] Students need to be taught effective study skills, but they also need to be taught that the effort and difficulty they face as they adopt new study habits are normal and build a solid foundation for long-term learning. To do this, law schools need to recast struggle as a positive sign of learning and skill building, instead of treating struggle as a negative, unhelpful feeling, indicative of impending failure.[166]

Students, and many law professors, conflate struggle with a lack of intelligence.[167] Decoupling these negative beliefs about learning, studying, and struggle will go a long way towards convincing students that law school learning requires different study methods because it is building different competencies than undergraduate education. Success requires rethinking prior habits and adopting more effective methods.

V. THE BENEFITS OF (LIMITED) OPEN-BOOK EXAMS: BETTER STUDY SKILLS, BETTER BAR EXAMS

Positing this discussion of exam modality as open-book versus closed-book misses the most important point about legal learning: it's all about the studying. Tests are essential learning tools; they not only assess what has been learned, but also reinforce and develop thinking skills. But before students get to exams, they need to have a comprehensive understanding of the material and methods being assessed. The learning process that takes place over the entirety of the semester should provide that comprehensive understanding, while the exam provides a capstone that assesses what a student has learned and reinforces their understanding on the material. Testing modalities that encourage learning through empirically-supported study methods will lead to student success.

163. Beth A. Brennan, *Explicit Instruction in Legal Education: Boon or Spoon?*, 52 U. MEM. L. REV. 1, 13 (2021).
164. *Id.*
165. Christopher, *supra* note 108, at 40.
166. *Id.* at 28.
167. *Id.* at 29.

It's not really about the exams; it's the techniques students use *to prepare for* exams that lead to durable, effective learning that is carried to the bar exam. And the techniques students use to prepare for exams are intimately and directly related to the exam modality chosen by their professor.[168]

A. The Pedagogical Argument Against Closed-Book Exams

Research comparing open- and closed-book assessments supports moving students from study methods focused on memorizing facts to study habits that develop higher-order thinking and problem-solving skills. While none of this research has been conducted at law schools in the United States, research conducted at law schools in Commonwealth nations, as well as research conducted at schools of education, and military, medical, and dental schools, supports the proposition that students focus less on memorization when they know they will be assessed using an open-book protocol.[169] In an evaluation of differing study behaviors used to prepare for open- and closed-book exams, researchers found that student study behaviors do vary with exam modality.[170] When students studied for closed-book exams, their "effort [was] directed mainly towards collecting and memorizing information so that it [was] readily available for use during the actual taking of the exam."[171] More problematically, research has found that closed-book exams, which encourage "rote memorization," lead to only superficial learning.[172]

Closed-book exams can only test what the student has memorized,[173] but this limits the ability to test how well the student can apply, analyze, and synthesize legal knowledge. A student who, through a disability, such as ADHD, or through injury or accident, struggles with memorization, cannot demonstrate their ability to apply law to novel facts because they

168. *See* sources cited pt. V.A.

169. *See, e.g.*, Maharg, *supra* note 60 (discussing research conducted in Commonwealth nations and in other schools); Cahill-Ripley, *supra* note 66 (discussing research conducted in other schools).

170. Theophilides & Koutselini, *supra* note 58, at 390; Maharg, *supra* note 60, at 219.

171. Theophilides & Koutselini, *supra* note 58, at 390.

172. Sumin Hong et al., *Effects of Blended Design of Closed-Book and Open-Book Examinations on Dental Students' Anxiety and Performance*, 23 BMC MED. EDUC., 2023, at 1, 2.

173. Mary Koutselini Ioannidou, *Testing and Life-Long Learning: Open-Book and Closed-Book Examination in a University Course*, 23 STUD. EDUC. EVAL. 131, 131 (1997).

will not recall enough of the blackletter law to apply to hypothetical facts. Closed-book exams discriminate against students with disabilities because they do not test what they are meant to measure.[174] Closed-book assessments do not assess the skills we seek to measure in neurotypical students either. A student who has focused their study on developing thinking and problem-solving skills—the skills students need to develop—may not be able to precisely state the blackletter law without a study aid because their focus was on higher-order skills that take time to learn.[175] Without adequate recall, the written response will include a less-well developed analysis, not because of their lack of skill, but because of their weakness in recall. In both cases, a closed-book exam does not accurately measure the student's ability to think and problem-solve.

Closed-book exams are a source of unnecessary student distress and are associated with increased anxiety. In a study conducted at a law school in New South Wales, Australia, "73[%] of students found . . . a closed book exam more stressful than an open book exam, . . . 73[%] . . . said that they had experienced 'significant anxiety' during their law studies[,] and 66[%] said they were 'very anxious' about the closed book exam."[176] Anxiety limits learning:[177] "anxious subjects engage in task-irrelevant processing which preempts processing resources and some of the available capacity of working memory," leaving students with less cognitive resources to respond to the exam.[178] The belief that students should be assessed under the high-pressure environment that mimics what they will face on the bar exam fails to acknowledge the corrosive effects of anxiety on learning—students who are anxious learn less, remember less, and are therefore less likely to

174. Joan W. Howarth & Judith Welch Wegner, *Ringing Changes: Systems Thinking About Legal Licensing*, 13 FIU L. REV. 383, 457 (2019); Ruth Colker, *Test Validity: Faster Is Not Necessarily Better*, 49 SETON HALL L. REV. 679, 690 (2019).

175. Allen & Jackson, *supra* note 57, at 30.

176. Cathy S. Sherry et al., *(Re)Introducing a Closed Book Exam in Law*, 28 LEGAL EDUC. REV. 1, 17 (2018).

177. Peter Sullivan et al., *Characteristics of Learning Environments in which Students Are Open to Risk Taking and Mistake-Making*, 25 AUSTRALIAN PRIMARY MATH. CLASSROOM 3, 6 (2020).

178. Michael W. Eysenck, *Anxiety, Learning, and Memory: A Reconceptualization*, 13 J. RSCH. PERSONALITY 363, 363–64 (1979).

master the skills they need to succeed.[179] Students, especially first- and second-year law students, need to develop thinking and problem-solving skills before preparing for the anxiety they will face when taking the bar exam. Beginning their legal education with exams, which will likely cause anxiety, limits what students need to learn to succeed on the bar exam.

B. Why Open-Book Exams Promote Equity in Assessment

Open-book exams encourage students to develop better study skills by removing memorization as a crutch, which will benefit them not just on exams, but in their preparation for the bar exam.[180] But open-book exams do more than just encourage study methods that lead to higher-order thinking and problem-solving skills—open-book exams also level the playing field amongst incoming students, giving students without established problem-solving skills the opportunity to develop those skills through effective learning and study techniques instead of memorization. Thus far, it is assumed that students will self-teach higher-order thinking and problem-solving skills through effective study techniques applied throughout their law school careers. These effective study techniques need to be explicitly taught; most students did not learn these techniques earlier in their academic careers.[181]

However, it is not true that all law students begin their legal education without higher-order thinking and problem-solving skills. This is less likely the result of natural aptitude than it is access to cultural and educational capital.[182] The gap between classroom instruction and assessment methods is an information asymmetry that benefits students who come into law school with cultural and educational capital through workplace experience, parental educational attainment, or exceptional (and unusual)

179. Karolina M. Lukasik et al., *The Relationship of Anxiety and Stress with Working Memory Performance in a Large Non-Depressed Sample*, 10 FRONTIERS PSYCH., Jan. 23, 2019, at 1, 2.

180. Sherry et al., *supra* note 175, at 1.

181. Elizabeth M. Bloom, *Teaching Law Students to Teach Themselves: Using Lessons from Educational Psychology to Shape Self-Regulated Learners*, 59 WAYNE L. REV. 311, 313 (2013).

182. Jun Xu & Gillian Hampden-Thompson, *Cultural Reproduction, Cultural Mobility, Cultural Resources, or Trivial Effect? A Comparative Approach to Cultural Capital and Educational Performance*, 56 COMPAR. EDUC. REV. 98, 118 (2012).

prior educational experiences.[183] Incoming students with experience in science, engineering, or medicine have worked with the scientific method.[184] The scientific method bears a close resemblance to legal-thinking and problem-solving, and is organized similarly to the IRAC/CREAC model expected by most professors on essay exams.[185] Students raised by professional parents, especially parents who themselves are lawyers or medical doctors, have witnessed this method of problem-solving by their parents throughout their formative years.[186] Students from unusually rigorous schools, specifically private secondary schools that were not subject to the mandates of No Child Left Behind or Every Student Succeeds Act, learn and practice higher-order thinking skills and problem-solving skills during their formative years.[187] None of these advantages are indicative of higher aptitude or ability; they are indicative of preexisting advantages that better prepare some students for the challenges of legal education before they even step through the front door.[188]

Students who are familiar with these problem-solving methods are at a distinct advantage when faced with an issue-spotting essay exam. Students who have practiced problem-solving methods outside of law school, they can apply them to their exam,

183. For a thorough discussion of how law school pedagogy rewards dominant groups, see Richard Delgado, *Rodrigo's Tenth Chronicle: Merit and Affirmative Action*, 83 GEO. L.J. 1711, 1738 (1995); Lucille A. Jewel, *Bourdieu and American Legal Education: How Law Schools Reproduce Social Stratification and Class Hierarchy*, 56 BUFF. L. REV. 1155, 1186–88 (2008).

184. Leslie Patrice Culver, *(Un)wicked Analytical Frameworks and the Cry for Identity*, 21 NEV. L.J. 655, 670 (2021); *see* Michael J. Higdon, *The Legal Reader: An Exposé*, 43 N.M. L. REV. 77, 92 n.75 (2013).

185. Culver, *supra* note 183, at 670; *see* Higdon, *supra* note 183, at 92–93 n.75.

186. For a discussion of maternal education, income, executive function and problem-solving ability, see Angela Blums et al., *Building Links Between Early Socioeconomic Status, Cognitive Ability, and Math and Science Achievement*, 18 J. COGNITION AND DEV. 16, 19–21, 28 (2017); *see also* Aaron N. Taylor, *Robin Hood, in Reverse: How Law School Scholarships Compound Inequality*, 47 J.L. & EDUC. 41, 66–70 (2018).

187. Children educated in private schools not subject to the testing mandates of No Child Left Behind or Every Child Succeeds Act have more time to build better thinking skills, the type that are not measured by standardized tests. For more information on the problems facing students educated in public schools subject to either federal law, see Christopher W. Holiman*, Leaving No Law Student Left Behind: Learning to Learn in the Age of No Child Left Behind,* 58 HOW. L.J. 195, 197 (2014); Sandra L. Simpson, *Law Students Left Behind: Law Schools' Role in Remedying the Devastating Effects of Federal Education Policy*, 107 MINN. L. REV. 2561, 2562 (2023); John F. Murphy, *Teaching Remedial Problem-Solving Skills to a Law School's Underperforming Students*, 16 NEV. L.J. 173, 175 (2015).

188. For a discussion of class representation and law school admissions, see Richard H. Sander, *Class in American Legal Education*, 88 DENV. U. L. REV. 631, 642 (2011) ("First, American law students tended to come from the very elite strata.").

even if they have not learned empirically-based study methods that develop higher-order thinking and problem-solving skills. This inequity is deepened with closed-book exams. Students who are familiar with systematic problem-solving methods have more time for recall, while students without cultural or educational capital must split their time between recall and developing a problem-solving schema.

C. What the Bar Exam Tests and Why Open-Book Exams Foster Those Skills

Much has been written, specifically by employees of the National Conference of Bar Examiners ("NCBE"), the entity that writes the Uniform Bar Exam ("UBE") and will write the NextGen Bar Exam ("NextGen"), about the skills the bar exam is meant to test and how their testing measures those skills.[189] Much has also been written about why the bar exam fails to measure the skills required of new attorneys and fails at its objective to provide consumer protection.[190] Regardless of whether the bar exam, in its current or future format, provides consumer protection by requiring all new attorneys to meet some artificial measure of competence, it is unlikely that the bar exam will be abandoned by states in the foreseeable future. The bar exam is successful in testing law school graduates on their reading speed, recall, and abstract higher-order thinking skills.[191] While reading speed can be increased and recall can be honed during the bar preparation period, whether that is limited to the time between graduation and the exam or whether it includes the last semester of law school, higher-order thinking and problem-solving skills take time and practice to develop.[192] Focusing on the development of these skills

189. *See* Marilyn Wellington, *The Next Generation of the Bar Exam: Quarterly Update*, 91 BAR EXAM'R 19 (2022); Joshua Gutzmann, *Leaving Langdell Behind: Reimagining Legal Education for a New Era*, 107 MINN. L. REV. 2389, 2402–03 (2023); Rosemary Reshetar, *Validity and the Bar Exam*, 91 BAR EXAM'R 23 (2022); Joanne E. Kane & Andrew A. Mroch, *The Testing Column: Testing Basics: What You Cannot Afford Not To Know*, 86 BAR EXAM'R 32 (2017).

190. Vollweiler, *supra* note 74; Maureen Straub Kordesh, *Reinterpreting ABA Standard 302(f) In Light of the Multistate Performance Test*, 30 U. MEM. L. REV. 299, 323 (2000); Deborah Jones Merritt, *Validity, Competence, and the Bar Exam,* AALS NEWS, https://www.aals.org/about/publications/newsletters/aals-news-spring-2017/faculty-perspectives/ (last visited Aug. 12, 2024); Steven Foster, *Does the Multistate Bar Exam Validly Measure Attorney Competence*?, 82 OHIO ST. L. J. ONLINE 31, 32–33, 41 (2021).

191. Winek, *supra* note 74; DeFabritiis & Vinson, *supra* note 52, at 117.

192. Lasso*, supra* note 54, at 93.

from the first year of law school puts less pressure on bar preparation during the last year of law school and during the post-graduate bar preparation period.

Unlike higher-order thinking skills, even the youngest children can master memorization, and commit large amounts of information to memory in a short period of time.[193] While the bar exam does ask test takers to commit to memory a broad array of subject areas (as of 2023, twelve subjects were included on the UBE),[194] memorization is not a skill students need to master before the bar exam; it is highly likely, if not certain, that they mastered techniques to memorize information long before they began law school.[195] Despite its ubiquity as a tool in primary and secondary school, memorizing the law for the bar exam is not an easy feat, and it requires time, stresses cognitive load, and places students with disabilities at a distinct disadvantage.[196]

Perhaps the most persuasive argument in favor of open-book exams as a method of improving bar passage rates comes from Professor Deborah Jones Merritt. With Logan Cornett of the Institute for the Advancement of the American Legal System, Professor Merritt wrote *Building a Better Bar*, a comprehensive evaluation of the bar exam as a test of minimum competence.[197] Professor Merritt found that memorization can actually impede performance; instead, bar takers should focus on "threshold concepts," which provide a "'baseline' for finding and applying more detailed points of law."[198] She found that memorization "generates mistakes" and fails at testing minimum competence, because "[s]ources matter when practicing law."[199] Professor Merritt also reiterates the importance of student-created (or graduate-created) outlines, which can provide the finer points of

193. Katrina Ferrara et al., *Detailed Visual Memory Capacity Is Present Early in Childhood*, 2 OPEN MIND 14, 21–22 (2017).

194. *Understanding the Uniform Bar Exam*, NAT'L CONF. BAR EXAM'RS (2023), https://www.ncbex.org/sites/default/files/2023-01/Understanding_the_UBE_2022.pdf.

195. *See generally* Julie Beardslee & Patricia Talarczyk, *Differences Among Visual, Auditory, and Kinesthetic Memorization Procedures when Children in Upper Elementary Schools Are Memorizing a Text*, 10 J. STUDENT RSCH., 2021, at 1 (discussing memorization strategies for children in grades four and five).

196. Sites, *supra* note 158, at 465.

197. Deborah Jones Merritt & Logan Cornett, *Building a Better Bar: The Twelve Building Blocks of Minimum Competence*, INST. FOR ADVANCEMENT AM. LEGAL SYS. 3 (2020).

198. *Id.* at 73.

199. *Id.* at 72.

law essential to a competent analysis of legal issues.[200] Broadly, closed-book exams not only fail to test relevant practice skills, but also encourage poor habits, such as relying on memory instead of consulting the "language of rules and statutes directly."[201] Professor Merritt's analysis is all the more salient in light of NCBE's representations that the NextGen bar exam will focus on minimum competence, the very subject of Professor Merritt's critique.[202]

It is a mistaken belief that students need to focus on memorizing the law throughout their law school career to pass the bar exam on their first attempt. Memorizing law during the 1L year is not a useful exercise because the law that will be tested is not the same. Yes, broadly, the common law tested on the bar is similar to what is taught during the 1L year. However, what 1L students learn from their first-year textbooks is unlikely to be the precise formulation of the rule statement they will learn from a commercial provider. Because the commercial provider statements of law carry on the bar exam, simply because so many graduates take a commercial course, the formulations of law from 1L year are likely to be incorrect. As noted by Professor Merritt, students need a deep understanding of threshold concepts.[203] Threshold concepts are ones that are essential to understanding entire areas of law. Students should gain the deep understanding of threshold concepts during their law school career: when they apply, how to apply them, and how they form the foundation of more nuanced, detailed areas of law, such as specific formulations of insanity as a defense.

D. Disadvantages of Open-Book Exams

One of the most notable disadvantages to open-book exams is student failure to properly prepare.[204] Students who misunderstand the content and purpose of essay exams can fail to properly prepare for open-book exams, incorrectly believing that

200. *Id.* at 73.
201. *Id.*
202. *Overview of Recommendations for the Next Generation of the Bar Examination*, NAT'L CONF. BAR EXAM'RS TESTING TASK FORCE 2 (2021), https://nextgenbarexam.ncbex.org/wp-content/uploads/TTF-Next-Gen-Bar-Exam-Recommendations.pdf.
203. Merritt & Cornett, *supra* note 196, at 47.
204. Sherry et al., *supra* note 175, at 5.

the materials they bring with them have all the answers.[205] No matter how many books and notes they bring to the exam, open-book exams will not help them with those tasks which require application, analysis, and synthesis of the law. Open-book exams can also lead to students' overreliance on their materials, leaving them with inadequate time to complete the exam.[206] While studies have found no difference in retention of knowledge when students are tested with open-book exams, these studies have limited applicability because they were not teaching or measuring study skills, only the results of open-book exams.[207] Bar professors find law school graduates retain little of their prior learning; while open-book exams may not increase retention, graduates are not retaining learning under current assessment regimes.[208]

Even when students have access to unlimited study materials during the exam, the disadvantages of open-book exams can be ameliorated with preparation and instruction by the professor, beginning with connecting assessment goals with learning goals. When learning objectives clearly state that the course will be using doctrinal material to develop thinking skills, also known as "thinking like a lawyer," students will be made aware that the focus will not be on memorizing the blackletter law, but on the skills developed from using the blackletter law. Students should know that the open-book assessment is measuring thinking skills, not research skills or memory. By incentivizing the use of effective study methods throughout the semester, culminating with practice problems and peer feedback, students devote as much time and effort to exam preparation as they would for a closed-book exam.[209] While a study at an Australian law school found that law students were less likely to attend class and complete extra credit assignments, these are not relevant concerns at most law schools in the United States, where ABA standards require student attendance and few law schools offer extra credit assignments.[210]

205. *Id.* at 4–5 (finding a "clear positive correlation between heavy reliance on notes and texts and lower test scores").
206. *Id.* at 3–4.
207. *Id.* at 4.
208. Sites, *supra* note 158, at 465–66.
209. Sherry et al., *supra* note 175, at 25.
210. *Id.* at 4.

E. The Best of Both Worlds: Limited Open-Book Exams

The disadvantages of open-book exams, such as inadequate preparation and overreliance on texts, are ameliorated by limited open-book exams. Unlike open-book exams, which are defined as "students' use of textbooks, notes, journals, and reference materials while taking tests,"[211] limited open-book exams allow a small, defined type and number of resources. The type of resources available to students would differ depending on the type of course; while a course focused on statutory interpretation might allow copies of relevant statutory handbooks and regulations, a typical first-year course might allow only a one-, two-, or three-page, student-created outline. Limiting study materials prevents students' overreliance on resources they can bring into the exam; students are less likely to "information dump" everything they find on an issue because they will not have extensive materials available.[212] With limited study materials available during the exam, students are less likely to spend too much time searching for answers; both the limit on study materials and the probability that students have memorized relevant information while creating their study materials would result in more time-on-task and less time searching in books.

By allowing test takers a limited, student-constructed resource, instructors are encouraging the thoughtful creation of study materials. To create a short outline, students need to assess what they know and what they need to know. By condensing self-created study materials to fit the predetermined page limits, students are continually reviewing and reassessing the material they need to know for the exam, predicting what they will be tested on, and how they will use what they have learned. To assess their own learning, students need to practice metacognitive skills, as well as self-testing. By the time students have finished constructing their limited study materials for use on the exam, they have internalized the material through repeated review and consolidation of their outline-in-progress. Through review, students strengthen their ability to remember. Remembering has

211. Tor Vidar Eilertsen & Odd Valdermo, *Open-Book Assessment: A Contribution to Improved Learning?*, 26 STUD. EDUC. EVAL. 91, 91 (2000).

212. Sherry et al., *supra* note 175, at 1–2.

two components: storage strength and retrieval strength.[213] Storage strength "reflects the amount of learning and determines the availability of information in memory."[214] Storage strength can be improved by repeatedly studying the same material, like when a student needs to review their outline many times in order to reduce the length to fit page limits.[215] Retrieval strength refers to how easily a memory can be recalled.[216] Retrieval strength is not necessary when students have access to a limited self-created study aid.[217] In the end, students are likely to memorize relevant legal rules if given access to self-created study materials meant to reduce their need to memorize.

A study in introductory statistics courses at the Air Force Academy confirmed the benefits of limited open-book exams. The instructors moved from closed-book to open-book exams, and later, to limited open-book exams, in order to increase student enjoyment of the course and encourage deeper learning.[218] The first open-book exam had lower final exam scores than the prior semester, which employed closed-book exams.[219] Students were not prepared for the exam and "spent more time searching for answers than . . . writing [their] responses."[220] The following semester, students were told to prepare for a more difficult exam because it was open-book; this resulted in slightly better student scores, but lower student enjoyment.[221] The final modification of the course allowed students to bring in handwritten notecards but did not allow other resources. Instructors found that the limited open-book exam met their expectations for student learning and enjoyment; students were better prepared, performed better, and reported more enjoyment of the course.[222]

213. Olesya Senkova et al., *Testing Effect: A Further Examination of Open-Book and Closed-Book Test Formats*, 1 J. EFFECTIVE TEACHING HIGHER EDUC. 20, 21 (2018).
214. *Id.*
215. *Id.*
216. *Id.*
217. *Id.*
218. Robert M. Block, *A Discussion of the Effect of Open-Book and Closed-Book Exams on Student Achievement in an Introductory Statistics Course*, 22 PRIMUS 228, 229 (2012).
219. *Id.* at 232.
220. *Id.* at 233.
221. *Id.* at 234.
222. *Id.* at 235–36.

F. Splitting the Baby: Adopting Limited Open- and Closed-Book Exams

Regardless of the evidence that open-book exams would benefit students by improving study methods that build higher-order thinking and problem-solving skills, some professors will not be convinced. Law schools do not need to adopt any one exam modality to the exclusion of others; law schools can adopt limited open-book exams to develop higher-order thinking and problem-solving skills for exams during the 1L year while keeping closed-book exams for some bar-tested 2L and 3L courses. Limited open-book exams are best deployed during the first year of law school, while students are still learning how to learn in law school, facilitating the development of higher-order thinking and problem-solving skills. Closed-book exams, which have been adopted by many professors because of the belief that exams should mimic the format of the bar exam, can be used in some upper-level courses, after law students have practiced study methods and have rudimentary, yet developing, problem-solving skills.

Closed-book exams are not entirely without value; "closed book exams can be a useful addition to a balanced assessment strategy . . . as they encourage students to adopt different learning strategies."[223] Research on memory has found that retrieval, especially challenging retrieval, builds knowledge.[224] Closed-book exams can challenge students to adopt learning strategies that will be helpful to memorizing a large amount of material for the bar exam and build their storage strength.[225] Professors can adopt a closed- and limited open-book exam format, where a quarter or half the exam employs multiple-choice questions without the benefit of supplementary aids, and an essay portion of the exam where student-created aids are allowed. This format mimics how students will be tested on the upcoming NextGen bar exam, where students will need to use provided resources on a test of performance skills, but multiple choice will remain closed-book.[226] Adding some closed-book exams during the 3L year also prepares students for the time pressure they will feel on the bar exam, while minimizing the corrosive effects of anxiety on learning higher-

223. Sherry et al., *supra* note 175, at 2.
224. Senkova et al., *supra* note 212, at 21, 23.
225. *Id.* at 21–22.
226. *NextGen Exam Sample Questions*, *supra* note 160.

order thinking and problem-solving skills.[227] Students who have already developed higher-order thinking and problem-solving skills can test their skills while beginning to memorize some of the doctrinal law necessary for success on the bar exam.

VI. CONCLUSION

Law schools should engage in empirical research into the efficacy of limited open-book exams.[228] While funding for empirical research into legal education is limited—since many grants are not open to law schools—law schools should explore partnering with schools of education to design and plan rigorous research into how student preparation differs when they will be taking a closed-book exam instead of an open-book exam.[229] Additional research into the long-term connection between exam preparation and bar exam success can aid both law schools and students. With more information on which methods of study and preparation result in bar exam success, law schools can better tailor their curriculum and assessment formats to the empirically proven techniques that lead to long-term retention, greater skills development, and, ultimately, better bar results.

227. Lukasik et al., *supra* note 178, at 7.

228. *Id.*; Sherry et al., *supra* note 175, at 6.

229. Sherry et al., *supra* note 175, at 2, 6 (discussing the limitations on studies of open-book exams due to "the discipline-specific nature of the research," small size of prior studies, the focus on multiple-choice exams, and the "lack of research on long-term learning outcomes" in law school); Lukasik et al., *supra* note 178, at 2, 6.