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FROM FILLING BUCKETS TO LIGHTING FIRES: THE ABA STANDARDS AND THE EFFECTS OF TEACHING METHODS, ASSESSMENTS, AND FEEDBACK ON STUDENT LEARNING OUTCOMES

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Derek Luke*

"Education is not the filling of a pail, but the lighting of a fire." W.B. Yeats[1]

HYPOTHETICAL:

Imagine three identical classrooms; each holds fifty similarly-situated students, and each has a different professor.[2] These professors work together and agree to cover the same subject matter, over the same amount of time, using the same

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[1] Robert Strong, *'Education is Not the Filling of a Pail, but the Lighting of a Fire': It's an Inspiring Quote, But Did WB Yeats Say It?*, IRISH TIMES (Oct. 15, 2013), https://www.irishtimes.com/news/education/education-is-not-the-filling-of-a-pail-but-the-lighting-of-a-fire-it-s-an-inspiring-quote-but-did-wb-yeats-say-it-1.1560192 (explaining that the quote is often attributed to Yeats, but there remains some uncertainty about that).

[2] LAWPROF, *The Student Scholarship Game*, INSIDE THE LAW SCHOOL SCAM (Aug. 17, 2011), http://insidethelawschoolscam.blogspot.com/2011/08/student-scholarship-game.html (explaining that 1L sections are organized by things like LSAT score and other admissions criteria, and section "stacking" with regard to scholarships is "highly implausible and even a bit paranoid. I mean surely no law school administration would engage in behavior that was both so grossly unethical and so easily discoverable in a civil action, right?").

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syllabus, and the same course materials.[3] Each professor administers the same pre-test at the beginning of each course, and the same final exam at the end of each course.[4] All students do poorly on the pre-test, each group receiving an average score of about 15% correct with similar, relatively high, standard deviations.[5] These standard deviations suggest that beginning knowledge states within each group is wide-ranging, meaning there is a wide spread between the performance of the highest and lowest achievers.[6]

[3] Steven I. Friedland, *Adaptive Strategies for the Future of Legal Education*, 61 LOY. L. REV. 211, 220 (2015) ("Professors teaching the same course to different students . . . should be able to cost-effectively share information with each other to ensure the learning is consistent. . . . Shared information could start with syllabi, learning outcomes, emphases, and the methods used.").

[4] *Id.* at 220–21 (critiquing how professors are generally isolated from one another and noting that "collaboration would serve as a quantum leap away from the silo system by promoting interconnectivity and a greater awareness of what students are facing in other classes. Collaborative methods could include sharing exams and testing methods prior to assessment").

[5] Notice that the starting knowledge state of each student group in the hypothetical is *not* zero. Measuring prior knowledge of students can save time by spending less on concepts already known to students or by focusing instruction on specific misconceptions or deficiencies. Rogelio A. Lasso, *Is Our Students Learning? Using Assessments to Measure and Improve Law School Learning and Performance*, 15 BARRY L. REV. 73, 102 (2010) (explaining that "[t]he greatest obstacle to learning is often not the students' lack of prior knowledge, but the existence of prior knowledge").

[6] STATISTICS HOW TO, *Standard Deviation*, https://www.statisticshowto.datasciencecentral.com/probability-and-statistics/standard-deviation/#SDD (last visited Apr. 8, 2019) (explaining low standard deviations and demonstrating that "[w]hen the bell curve is very steep, your data has a small standard deviation—your data is tightly clustered around the mean"); U. LEICESTER, *Numeracy Skills: The Standard Deviation*, https://www.le.ac.uk/oerresources/ssds/numeracyskills/page_17.htm (last visited Apr. 16, 2019) ("For example: if the average, or mean, of a dataset is 25 points out of the total, and its standard deviation value is 1.6 points, then 68% of the values in the dataset will fall between MEAN-1SD (25-1.6 = 23.4) and MEAN+1SD (25+1.6=26.6) and 99% of the values will lie between MEAN-3SD (25-4.8=20.2) and MEAN+3SD (25+4.8=29.8). If the dataset had the same mean of 25 but a larger standard deviation value (for example, 2.3) it would indicate that the scores were more dispersed, or more spread out. The frequency distribution for a dispersed dataset would still show a normal distribution curve, but when plotted on a graph the shape of the curve will be flatter as in the below right example.").

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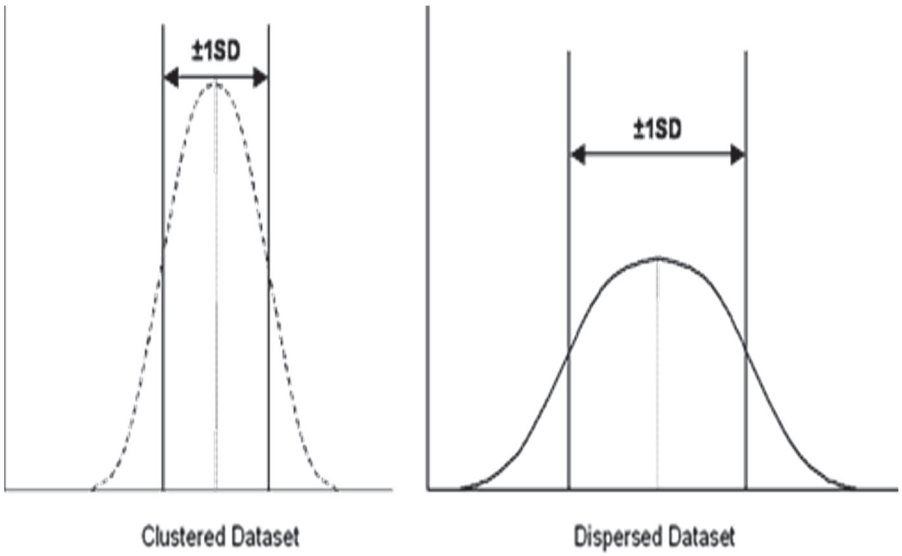
However, after the students take identical final exams, or post-tests,[7] differences in learning, as measured by performance on the post-tests, are seen.[8] Students in Classroom One had an average post-test score of 70% with a high standard deviation (evidencing the lowest overall achievement of the three student groups and an unaddressed knowledge gap, or "spread," between the highest and lowest achievers). Classroom Two had an average post-test score of 80% with a slightly lower standard deviation (indicating greater overall achievement than Classroom One and a modest "closing of the gap" between the highest and lowest achievers due to a reduction in the standard deviation). Classroom Three had an average post-test score of 90% with the lowest standard deviation value amongst the three classes (evidencing the greatest overall achievement and a greater reduction in the knowledge gap, effectively "tightening" the bell curve and shifting it to the right for all students). Students in Classroom Three are more similar to one another, in terms of their knowledge states, than students in the other two classrooms with wider



[7] Starla J. Williams & Iva J. Ferrell, *No At-Risk Law Student Left Behind: The Convergence of Academic Support Pedagogy and Experiential Education*, 38 S. ILL. U. L.J. 375, 395 (2014) ("This instrument . . . serves as a baseline to assess learning when students complete the identical diagnostic tool as a post-test at the end of the semester.").

[8] David J. Herring & Collin Lynch, *Teaching Skills of Legal Analysis: Does the Emperor Have Any Clothes?*, 18 LEGAL WRITING: J. LEGAL WRITING INST. 85, 109 (2012) (answering the question, "[d]id the students improve overall from pre- to post-test?").

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knowledge gaps.[9] Students in Classroom Three have attained a higher overall mastery of the material than students in the other classrooms.[10]

What are the most likely explanations for the discrepancies between final scores and standard deviation values? Did students in Classroom Three simply get lucky[11] when compared to those in the other classrooms? How was the learning gap, measured by standard deviation,[12] decreased in Classroom Three but not in Classroom One?[13] Did the professor in Classroom Three use teaching assistants?[14]

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[9] Joan M. Rocklin, *Exam-Writing Instruction in a Classroom Near You: Why It Should Be Done and How to Do It*, 22 LEGAL WRITING: J. LEGAL WRITING INST. 189, 233 (2018) (explaining that the knowledge gap can be closed with feedback; "[f]or practice to be effective and assist student learning, students must receive prompt feedback on their efforts. This feedback should identify gaps in students' learning and help students close those gaps. To help students close the gap, feedback should provide more than a correct answer; it should explain why an answer is correct or, in the case of an incorrect answer, explain how to improve.").

[10] Susan Hanley Duncan, *They're Back! The New Accreditation Standards Coming to a Law School Near You—A 2018 Update, Guide to Compliance, and Dean's Role in Implementing*, 67 J. LEGAL EDUC. 462, 477 (2018) ("Summative assessment methods are measurements at the culmination of a particular course . . . that measure the degree of student learning.").

[11] James R.P. Ogloff et al., *More Than "Learning to Think Like a Lawyer": The Empirical Research on Legal Education*, 34 CREIGHTON L. REV. 73, 85 (2000) (explaining that "students with external attributions likely perceive their performance . . . as somewhat beyond their own control. Success is interpreted as 'luck' or 'chance.' As a result, they may believe that they are less likely to . . . improve their performance, since they feel that so much . . . is beyond their control."); MINDSET WORKS, *Dr. Dweck's Research Into Growth Mindset Changed Education Forever*, https://www.mindsetworks.com/science/ (last visited Apr. 2, 2019) (similarly explaining "that telling children they are smart encourages a fixed mindset, whereas praising hard work and effort cultivates a growth mindset. When students have a growth mindset, they take on challenges and learn from them, therefore increasing their abilities and achievement.").

[12] Roland G. Fryer & Steven D. Levitt, *Falling Behind*, 4 EDUCATIONNEXT 4 (2004), https://www.educationnext.org/fallingbehind/ ("[T]he achievement gap, while negligible among black and non-Hispanic white children with similar characteristics when they enter kindergarten, expands as they grow older. From the beginning of kindergarten to the end of first grade, black students lose 20 percent of a standard deviation . . . relative to white students. . . .").

[13] *See generally* Anthony Niedwiecki, *Teaching for Lifelong Learning: Improving the Metacognitive Skills of Law Students Through More Effective Formative Assessment Techniques*, 40 CAP. U. L. REV. 149, 177 (2012) ("[R]esearchers found that good feedback helps clarify the goals of an assignment, provides opportunities to close the gap between the students' performance and the desired learning outcomes, encourages an open dialogue between the professor and the students, and provides information to professors so they can adjust their teaching.").

[14] Charles T. Clotfelter et al., *Teaching Assistants and Nonteaching Staff: Do They Improve Student Outcomes?*, NAT'L CTR. FOR ANALYSIS OF LONGITUDINAL DATA IN ED. RES. 25 (2016) (stating that, "[t]eaching assistants help to boost proficiency rates . . . .").

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If the students in each group had taken midterm exams, would those results have represented half of what the final exam results were or, alternatively, would the act of administering midterms have affected the results of the final exams?[15] If professors use a forced curve, does it matter that professors have different levels of competency or that discrepancies between classes exist?[16] What did these three professors do differently, or similarly, while teaching their classes?[17] Do all three professors have the same level of mastery over the subject matter or pedagogical practices, and would a different level of mastery affect one's ability to teach a class

[15] Emily Zimmerman, *What Do Law Students Want?: The Missing Piece of the Assessment Puzzle*, 42 RUTGERS L.J. 1, 25 (2010) ("In one year, the students were assessed less frequently (two midterms and a final), and in the next year, the students were assessed more frequently (six bi-weekly exams and a final). The researchers found that women who were tested more frequently experienced the greatest increase in final exam scores and final grades in the course, although men who were tested more frequently also received higher scores and grades. The researchers also found that students in the class that was tested more frequently 'rated both the course and the instructor higher [on course evaluations] compared with students' in the class that was tested less frequently.").

[16] Evan Jones, *How Do Law School Grades Work?*, LAWSCHOOLI (Feb. 26, 2015), https://lawschooli.com/how-do-law-school-grades-work/ (explaining that "[a] small difference in quality might separate the best-written exams in the class from the worst, and yet the best ones get a stellar grade, and the 'inferior' tests, even if they are still of high quality, earn a poor grade due to the curve. Moreover, the nature of this type of grading system means that most people tend to be forced into a mediocre middle that is, in a sense, arbitrary."); Adam Grant, *Why We Should Stop Grading Students on a Curve*, N.Y. TIMES (Sept. 10, 2016), https://www.nytimes.com/2016/09/11/opinion/sunday/why-we-should-stop-grading-students-on-a-curve.html (arguing against grade cutoffs and the forced curve, "[i]t arbitrarily limits the number of students who can excel. If your forced curve allows for only seven A's, but 10 students have mastered the material, three of them will be unfairly punished."); *but see* Jeffrey Evans Stake, *Making the Grade: Some Principles of Comparative Grading*, 52 J. LEGAL EDUC. 583, 599 (2002) ("[F]orced curves will have the salutary effect of keeping all teachers to the same mean and standard deviation. The forced curve has the added benefit of avoiding differences in skewness and other statistics that are used to describe distributions.").

[17] Laura Bolton, *Effective Learning Strategies to Improve Basic Education Outcomes*, K4D (Apr. 27, 2018), https://assets.publishing.service.gov.uk/media/5b18f322e5274a18f134fd1b/Effective_Learning_Strategies.pdf ("Classroom improvements combined with structured pedagogy made the greatest positive impact on learning. Materials and technology were found to be supportive but not sufficient alone to improve learning."); SUSAN RICKEY HATFIELD, THE SEVEN PRINCIPLES IN ACTION: IMPROVING UNDERGRADUATE EDUCATION 11–12 (1995) ("The substantial body of research on effective teaching . . . emphasizes teacher behavior that actively engages students in learning. In addition to other traits such as command of subject matter, clear communication of expectations, enthusiasm, and expressiveness, effective teachers are often identified as those who encourage classroom interaction, establish rapport with students, and provide individualized feedback and reinforcement of student performance. Good teachers are further described as approachable, interested in students' learning and well-being, accessible, open to students' ideas and questions, and concerned about students' progress.").

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effectively?[18] What exactly are the tests measuring?[19] What does scoring high on a final exam mean? What does scoring low mean?

This is not an exhaustive list of all the questions that could be asked of this hypothetical; only some of these questions will be addressed by this Note. Of the ones addressed, they will necessarily be partial explanations due to the broad nature of the topic and the limited scope of this Note.

INTRODUCTION

Part I gives background on the standards of legal education promulgated by the American Bar Association ("ABA"), reviews recent updates to the ABA's Standards for Legal Education ("Standards"), and highlights criticisms of these updates. Part II discusses common teaching methodologies used in legal education,[20] gives background on the evolution of learning theories, identifies learning theories associated with the most common teaching methodologies, and discusses research regarding the effectiveness of these common methodologies. Part III outlines how legal education can move into the 21st century and concludes with direct suggestions of first steps professors and law schools can take to improve legal education.

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[18] CHARLENE TAN, EDUCATIONAL POLICY BORROWING IN CHINA: LOOKING WEST OR LOOKING EAST? 63 (2016) ("[T]o give a student a cup of water, the teacher needs to have a bucket of water."); Sherri Lee Keene, *It Was the Best of Practice, It Was the Worst of Practice: Moving Successfully from the Courtroom to the Classroom*, 48 DUQ. L. REV. 533, 538 (2010) ("When she is asked to explain how to complete a given task, the experienced practitioner may . . . not know how to describe the process she uses or even what it is. . . . 'For the expert writer, there is an almost unconscious application of strategies, an "automaticity" to the writing.'").

[19] Christina Shu Jien Chong, *Battling Biases: How Can Diverse Students Overcome Test Bias on the Multistate Bar Examination*, 18 U. MD. L.J. RACE, RELIGION, GENDER & CLASS 31, 41 (2018) (discussing the Multistate Bar Exam, "Opponents . . . argue the test is invalid because it fails to consider important skills, such as client interaction and negotiations, and is an artificial simulation because it requires memorization and imposes unrealistic time constraints.").

[20] "Common methodologies," for the purposes of this Note, includes both teaching methods as well as feedback and assessment methods. This is not to say, however, that professors do not affect students in ways other than strict "common methodologies." Sue Liemer, *How to Support International ELL Law Students When You Only Have a Few of Them*, 26 No. 2 PERSP: TEACHING LEGAL RES. & WRITING 57 (2018) (regarding support of international students, "[f]rom the law professors' perspectives, this [interpersonal] exchange helped create some rapport with the student and let her know the professors were genuinely interested in getting to know a little about her. To the extent it helped her relax a bit, it allowed her to function in spoken English more as she would in a non-assessment situation.").

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PART I

A. Background on the Standards

The ABA has promulgated Standards since 1921.[21] The Council of the Section of Legal Education and Admissions to the Bar ("Council") uses the Standards to determine whether a law school receives or retains its ABA accreditation.[22] Over the years, the Standards have undergone comprehensive revisions several times; the most recently adopted revisions were proposed in 2008 and approved by the Council in 2014.[23] As of this writing, the 2018–2019 Standards (and their accompanying interpretation and guidance documents) are the current criteria that law schools must meet to obtain or retain ABA accreditation.[24]

B. The Updated Standards

Chapter 3 of the Standards is titled "Program of Legal Education" and will be the main focus of this Note.[25] Within Chapter 3, distinctions are drawn between the *content* presented to students, and the *assessment methods* used to evaluate student learning and competency over the subject matter.[26] Indeed, *whether* students succeed in obtaining competency in a given course of study is a new focus of the ABA standards.[27] Essentially, law schools are moving away from focusing on "What is being *taught* by professors?" and towards asking "What is being *learned* by students?"

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[21] ABA, ABA STANDARDS AND RULES OF PROCEDURE FOR APPROVAL OF LAW SCHOOLS 2018–2019, at v (2018), https://www.americanbar.org/groups/legal_education/resources/standards/ [hereinafter ABA STANDARDS].

[22] *Id.* Per the directive from the United States Department of Education, it is the Council that is the accreditor of law schools and not the ABA itself.

[23] *Id.* at vi. Technically it is the Standing Committee on Legal Education and Admissions to the Bar (SCLEAB) along with the Council of the Section of Legal Education and Admissions to the Bar (the Council) that promulgate, review, and revise such rules.

[24] *Id.* at vii.

[25] *Id.* at 15–24.

[26] *Id.* Specifically, look towards the *types of courses* required for graduation and the *use of formative and summative assessments* to measure student growth.

[27] *Id.* "Mastery" is not used in the ABA's language, but "competency" is, and it is located within Standard 302. Competency is not a defined term within the Standards, however.

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Traditionally, legal education focused much more on the former,[28] or on input-based measures: That is, "What is the professor inputting, or intending to teach, to a classroom full of students? What is the content that is being *presented* to the students?"[29] The ABA's stance on this practice has shifted and the focus is now on outcome-based measures: "What have the students *learned* by the end of a given course? Can we *measure* what students have learned against where the students started at the beginning of the course?"[30]

One criticism of Chapter Three's updates is that the Standards lack the requirement that any assessments or measurements be "valid and reliable"[31] in terms of what they are measuring. A measurement method is valid if it accurately measures what it is being used to measure (i.e., "Is this test measuring whether students are learning the skills and concepts being taught?"), and a method is reliable if it produces consistent results when administered by different people at different times measuring different samples (i.e., "Could a different professor use this same assessment to measure the same skills and concepts if they were teaching the same course to a different group of students?").[32] If methods of assessment are not evaluated for validity and reliability, one cannot know the difference between

[28] "Legal education" means both the ABA and law schools. Steven C. Bahls, *Adoption of Student Learning Outcomes: Lessons for Systemic Change in Legal Education*, 67 J. LEGAL EDUC. 376, 406 (2018) (explaining the rise of outcome-based measures, "[a]s noted by the Report of the Outcomes Measures Committee, starting in the late 1990s, regional accreditation organizations 'have all moved from an input-based, prescriptive system of accreditation to an outcome-based system of accreditation.' While law schools could once 'fly beneath' the regional accreditation radar screen, they increasingly were no longer able to do so. This put law faculties into the position of either having universities dictate assessment regimes to them or working collectively with the ABA to develop standards and develop assessment regimes that make the most sense for legal education. Law school deans and faculty who argue for the traditional input-based regime lost support from both the broader academy and the legal professions.").

[29] *Id.*; *see also* Eric A. Hanushek, *The Failure of Input-Based Schooling Policies*, 113 ECON. J. F64 (2003) (discussing what input-based measures are and the reasoning behind them. Professors tend to blame external characteristics of students or a whole law school class when students do not master concepts.).

[30] Hanushek, *supra* note 29, at F90 ("The simple definition of teacher quality used here is an output based measure that focuses on student performance, instead of the more typical input measures. . . . High quality teachers are ones who consistently obtain higher than expected gains in student performance, while low quality teachers are ones who consistently obtain lower than expected gains. Using that definition, variations in teacher quality can be obtained by estimating fixed effects models of student performance after conditioning on entering student performance and other factors that affect achievement gains.").

[31] *See generally* U.S. FLA., *Classroom Assessment: Reliability and Validity*, https://fcit.usf.edu/assessment/basic/basicc.html (last visited Apr. 12, 2019) (explaining that validity and reliability are terms of art among those who design assessments and use different measurement methods).

[32] *Id.*

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accurate results and inaccurate ones.[33] In other words, the new standards purport to focus on student learning outcomes, but to the extent a measurement occurs the standards do not require measurements to be valid or reliable, or that such measurements can be compared to one another in a meaningful way.

Similar to a law school mission, or vision statement, Standards 301 and 302 require schools to establish and publish student learning outcomes that ensure a minimum competency in a variety of areas.[34] Competency, however, is not a defined term in the Standards, leaving one to wonder what it means to have "competency" in a given area of the law. The most recent guidance documents for Standards 301 and 302, published in 2015, state that "[l]earning outcomes for individual courses must be published in the course syllabi,"[35] and that "[l]earning outcomes must consist of clear and concise statements of knowledge . . . skills . . . and values . . . students should master."[36] The inclusion of these learning outcomes and concise statements of knowledge, skills, and values within course syllabi is an easy step schools can take to show they are, in fact, focused on learning *outcomes* rather than on *inputs*, but, again, these documents do nothing to define what competency means or how such competency shall be measured.

In an attempt to provide guidance on measuring student learning, Standard 314's updated language states "[a] law school *shall* utilize both formative and summative assessment methods in its curriculum to measure and improve student learning and provide meaningful feedback to students."[37] On its face, and according to the guidance documents, Standard 314 appears to have been updated to align with *ten other graduate and professional programs*, all of which focus on outcome-based

[33] *Id.*

[34] ABA STANDARDS, *supra* note 21, at 15–16. Standards 301 and 302 list the ABA's minimum requirements for schools to create student learning outcomes and also states that such student learning outcomes will be met to a level of "competency." It should be noted that the word "competency" is not defined under standard 302.

[35] Managing Director's Guidance Memo: Standards 301, 302, 314 and 315, ABA, 4 (2015), https://www.americanbar.org/content/dam/aba/administrative/legal_education_and_admissions_to_the_bar/governancedocuments/2015_learning_outcomes_guidance.pdf [hereinafter ABA Guidance].

[36] *Id.* The word "master" is not used within Standard 302, but its use in the guidance documents suggests that a certain level of proficiency by students might be required in order for law schools to fully meet Standard 302.

[37] ABA STANDARDS, *supra* note 21, at 23 (emphasis added).

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measures.[38] The guidance and interpretation documents for Standard 314 backpedal from that facial assessment by taking advantage of the "shall" language.[39] This "shall" wording technically allows law schools to change nothing with regard to their assessment methods because law schools already use both forms of assessment (formative and summative) within their buildings—writing classes, generally, use formative assessment methods, and doctrinal courses, generally, use summative assessment methods.[40] This raises the question, "Why would the ABA have updated the assessment standards if they intended to interpret such standards in a way that schools did not have to do anything differently moving forward?"

Indeed, the interpretation document for Standard 314 gives general differences between formative and summative assessments,[41] but the document ends up not being very clear or tangible in terms of what professors or school administrators ought to do to best comply with the standard.[42] Additionally, Interpretation 314-1 misstates *how* formative assessments should be utilized within each course,[43] thus

[38] ABA Guidance, *supra* note 35, at 3 ("In addition, the Committee reviewed the accreditation standards of ten other professional accrediting bodies. It found all ten applied standards based on outcome measures.").

[39] *See* Gutierrez de Martinez v. Lamagno, 515 U.S. 417, 433 n.9 (1995) ("Though 'shall' generally means 'must,' legal writers sometimes use, or misuse, 'shall' to mean 'should,' 'will,' or even 'may.' ('shall' and 'may' are 'frequently treated as synonyms' and their meaning depends on context); ('[C]ourts in virtually every English speaking jurisdiction have held—by necessity—that shall may mean may in some contexts, and vice versa.'")) (internal citations omitted).

[40] Richard K. Neumann Jr., Comment on Proposed Standards 302, 303, and 314 (2014), https://www.americanbar.org/content/dam/aba/administrative/legal_education_and_admissions_to_the_bar/council_reports_and_resolutions/comments/201401_comment_ch_3_richard_k_neumann_jr.authcheckdam.pdf ("Every law school course already uses at least one assessment method: the summative assessment. . . . A casebook teacher can satisfy the proposal by giving a final exam, grading it, and reporting the grades to the registrar without saying anything to students about the exam afterward. And every law school already uses both assessment types 'in its curriculum.' Its legal writing teachers use formative assessment. So do its clinicians and other skills teachers.").

[41] ABA STANDARDS, *supra* note 21, at 23. Interpretation 314-1 for formative assessment seems to suggest, by use of the word "or," that professors need not conduct formative assessments while teaching their courses. It is not best practice, pedagogically, to suggest this, and it essentially allows professors off the hook from ensuring they respond appropriately to students' learning needs. *Id.* ("Formative assessment methods are measurements at different points during a particular course *or* at different points over the span of a student's education that provide meaningful feedback to improve student learning.") (emphasis added).

[42] Neumann, *supra* note 40, at 8 ("The 2014 proposed Interpretation 314-1 attempts to define formative assessment and summative assessment. But it doesn't do so with much clarity.").

[43] *Id.* (explaining that formative assessment should be used *throughout* the learning process in each course. Indeed, "Formative assessment evaluates a student's learning *while the student is learning*. It's

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downplaying or ignoring the effectiveness of formative assessment methods based on decades of educational research.[44] Interpretation 314-2 allows professors to continue with the status quo by not *requiring* the use of formative assessments in every course; the interpretation document states, "[a] law school need not apply multiple assessment methods in any particular course."[45]

The guidance document for Standard 314 (which is different than the aforementioned interpretation document) *does* mandate "both formative and summative assessments . . . be utilized by law schools" generally, and that the "Accreditation Committee . . . will require that formative assessment be integrated into the law school's program to . . . 'provide meaningful feedback to improve

communicated to the student promptly so the student can improve the process of learning. It helps to *form* learning.") (emphasis added); ABA STANDARDS, *supra* note 21, at 23 (Standard 314-1 states: "*Formative assessment methods are measurements at different points during a particular course or at different points over the span of a student's education that provide meaningful feedback to improve student learning. Summative assessment methods are measurements at the culmination of a particular course or at the culmination of any part of a student's legal education that measure the degree of student learning.*" The phrase "over the span of a student's education" is not accurate with how formative assessments ought to be used.).

[44] *See generally* JOAN HERMAN, FORMATIVE ASSESSMENT FOR NEXT GENERATION SCIENCE STANDARDS: A PROPOSED MODEL (2013), https://www.ets.org/Media/Research/pdf/herman.pdf (explaining the results of a meta-review with sources dating back to 1918: "The researchers concluded that formative assessment had an effect size of between .4 and .7 on standardized tests, making it demonstrably one of the most effective educational interventions in practice, particularly for low achieving students."); *see also* HANOVER RESEARCH, THE IMPACT OF FORMATIVE ASSESSMENT AND LEARNING INTENTIONS ON STUDENT ACHIEVEMENT (2014), http://www.hanoverresearch.com/media/The-Impact-of-Formative-Assessment-and-Learning-Intentions-on-Student-Achievement.pdf (discussing research which included studies from 1986, "findings indicate that students who receive formative assessment perform better on a variety of achievement indicators than their peers do"); Sally I'Anson, *Using Descriptive Feedback as Part of Formative Assessment*, POWERSCHOOL: RESOURCE LIBRARY: BLOG (June 16, 2016), https://www.powerschool.com/resources/blog/using-descriptive-feedback-as-part-of-formative-assessment/ (explaining that "[f]ormative assessment improves student achievement. It has been proven in countless research studies, conducted over the past decade, to be one of the most effective instructional tools to positively influence student achievement."); NAT'L COUNCIL OF TEACHERS OF MATHEMATICS, BENEFITS OF FORMATIVE ASSESSMENT, https://www.nctm.org/Research-and-Advocacy/Research-Brief-and-Clips/Benefits-of-Formative-Assessment/ (last visited Apr. 12, 2019) [hereinafter COUNCIL OF TEACHERS] (stating that "[f]ormative assessment produces greater increases in student achievement and is cheaper than other efforts to boost achievement, including reducing class sizes and increasing teachers' content knowledge"); Alex Djuricich & Ulrik Juul Christensen, *Formative vs. Summative Assessment* (2016), https://knowledgeplus .nejm.org/blog/formative-vs-summative-assessment/ (discussing that, "[a]ssessment *for* learning has the potential to make everyone better, shifting the bell curve to the right for all learners.").

[45] ABA STANDARDS, *supra* note 21, at 23.

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student learning.'"[46] *How* and *when* such formative feedback will be used is, apparently, left up to the schools or professors to decide, as is how meaningful such feedback will be. What is clear from these documents is that individual professors will not be required to do anything differently as long as they administer at least one assessment in their course and the law school's program provides feedback. These documents allow schools to "bolt on" formative assessments and feedback—at some point—during a student's legal education, but do not require it to be administered in any particular course.

PART II

A. Common Methodologies of Teaching and Assessment in Law Schools

The most popular teaching practices at law schools are based upon the Socratically-influenced case method developed by Christopher Columbus Landgell in 1870.[47] Langdell's method (sometimes called the "case-study" method) aims to combine "the careful study of court decisions with the Socratic method of teaching, modeled after that used by the Greek philosopher Socrates."[48] In a classroom setting, this method, when used correctly, allows an individual student engaging in "a series of instructor-led questions whose answers are designed to lead to a logical conclusion foreseen by the instructor" while the rest of the class listens intently to the dialogue.[49] In its simplest form, "the Socratic method is a teaching style in which a student is selected at random and then questioned about a case previously prepared for class discussion."[50] The continued questioning of this student often proceeds into hypothetical situations to force the student to apply the court's reasoning to novel scenarios.[51] Some other teaching methods related to, but which are often confused

[46] ABA Guidance, *supra* note 35, at 4–5.

[47] N. Denise Burke, *Student Engagement in Law School Preparing 21st Century Lawyers*, 34 WYO. L. 28, 29 (2011). *But see* Patricia Mell, *Taking Socrates' Pulse*, 81 MICH. B.J. 46, 47 (2002) (explaining that, "even at Harvard, the institution that started it all, the self-identifying Socratic method professors do not use the method in its pure form.").

[48] Burke, *supra* note 47, at 29.

[49] *Id.*

[50] Mell, *supra* note 47, at 46.

[51] *Id.*

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for or conflated with this approach,[52] include the mixed case-study/lecture[53] and the full lecture.[54] Question-and-answer sessions,[55] in-class debates,[56] and practice problems or exercises[57] are other more innovative and active teaching methods utilized in law schools, but these methods are not the norm.[58] Due to a lack of information, experience, and training, professors rarely try alternate teaching methods.[59]

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[52] Paul T. Wangerin, *Law School Academic Support Programs*, 40 HASTINGS L.J. 771, 796 (1989) ("Experience suggests that very few modern legal educators actually use the Classic Case Method, although virtually all law school professors *insist* that they do.") (emphasis added).

[53] Peter Sankoff & Craig Forcese, *The Flipped Law Classroom: Retooling the Classroom to Support Active Teaching and Learning*, 2015 CAN. LEGAL EDUC. ANN. REV. 119, 119 (2015) ("[P]rofessors (as well as students) have also begun questioning the style of classroom instruction, expressing disenchantment with the traditional model of mixed-lecture and Socratic method that dominates most large group classrooms.").

[54] Paul T. Wangerin, *Technology in the Service of Tradition: Electronic Lectures and Live-Class Teaching*, 53 J. LEGAL EDUC. 213, 213–14 (2003) ("[A]nyone who has carefully observed actual law classes—let alone anyone who has conducted 'action research' studies of classroom teaching in law schools—knows that what occurs in many of them is precisely what so many teachers deny is happening, namely, *lots and lots of lecture teaching*.") (emphasis added); Alex Berrio Matamoros, *Answering the Call: Flipping the Classroom to Prepare Practice-Ready Attorneys*, 43 CAP. U. L. REV. 113, 113 (2015) ("The increasing emphasis on legal skills sheds light on an interesting paradox within legal education; in legal skills courses—those that best lend themselves to active learning experiences—instructors *frequently fill valuable classroom time with passive lectures*. . . .") (emphasis added).

[55] Burke, *supra* note 47, at 29.

[56] Erin Ryan et al., *When Socrates Meets Confucius: Teaching Creative and Critical Thinking Across Cultures Through Multilevel Socratic Method*, 92 NEB. L. REV. 289, 348 (2013) ("An ideal Multilevel Socratic classroom mixes peer instruction with individually targeted dialogue, together with other teaching innovations, including role plays, debates, simulations, field trips, flipped classroom, and other creative forms of engagement.").

[57] John B. Mitchell, *A Clinical Textbook?*, 20 SEATTLE U. L. REV. 353, 353 (1997) ("Increasingly, texts for traditional courses include problems and some infrequent lawyering exercises.").

[58] Myron Moskovitz, *Beyond the Case Method: It's Time to Teach with Problems*, 42 J. LEGAL EDUC. 241, 241 (1992) ("Everywhere we looked, we saw nothing but the case method. Was some young, insecure assistant professor likely to buck the system? Not likely. The rookie followed the crowd, adopted the case method, was knighted with tenure, and now passes the tradition on to new rookies."); John O. Sonsteng et al., *A Legal Education Renaissance: A Practical Approach for the Twenty-First Century*, 34 WM. MITCHELL L. REV. 303, 308–19 (2007) (calling for a "Legal Education Renaissance" and reasoning that "[t]oday's method of teaching law students is not a model of maturation and modernization; it is older than the telephone").

[59] James Eagar, *The Right Tool for the Job: The Effective Use of Pedagogical Methods in Legal Education*, 32 GONZ. L. REV. 389, 390 (1997) ("For the past century one pedagogical method, the 'case method' with its accompanying 'Socratic questioning,' has held near-total dominance in legal education. Consequently,

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In terms of assessment and feedback, any tool that measures student understanding can be used formatively,[60] summatively,[61] or as a combination of the two. The most common method used in law schools across the country is the summative assessment.[62] Many law professors do not utilize formative assessment methods much, if at all.[63] Indeed, "[i]nstead of frequent formative assessments that provide students with the opportunity to gauge their progress as they acquire new skills, the end-of-the-term summative examination model still dominates the law school assessment landscape."[64]

Unlike summative tools, where the main focus is on assigning each student a grade or a point value based on a final product, formative assessment tools focus on providing feedback to the student, which is generally ungraded and individualized.[65] Ideally, both students and teachers receive feedback when using formative assessments.[66] Formative assessments ensure students get feedback about their learning, and professors get feedback about their teaching as well as whether students actually learned what the teacher was aiming to teach.[67] Preferably, formative assessments have no grade or point value associated with them, and, if they do, such

law teachers often lack information, experience, and training regarding alternative pedagogical methods. The dominance of the case method tradition has likely limited the pedagogical choices instructors make in teaching law.").

[60] Kelly S. Terry, *Embedding Assessment Principles in Externships*, 20 CLINICAL L. REV. 467, 477 (2014) (explaining that "[f]ormative evaluation provides students with 'real time' feedback on their performance, thus giving them an opportunity to identify areas that need improvement before a final judgment is rendered").

[61] *Id.* at 477–78.

[62] *Id.* at 477 ("Summative assessment is more common in law schools. Summative assessments tend to occur at the end of a course and typically are used 'for assigning a grade or otherwise indicating a student's level of achievement.'").

[63] *Id.* at 491 (citing Roy Stuckey, *Can We Assess What We Purport to Teach in Clinical Law Courses?*, 9 INT'L J. CLIN. LEGAL EDUC. 9, 24–25 (2006) (discussing that all assessments "should be formative until the student has had an opportunity to study and practice the required task. Some students will demonstrate good practice skills in their first performance, but those who do not should not suffer a grade penalty because other students came into the course with more highly developed skills or knowledge.")).

[64] Herbert N. Ramy, *Moving Students from Hearing and Forgetting to Doing and Understanding: A Manual for Assessment in Law School*, 41 CAP. U. L. REV. 837, 837 (2013).

[65] *Id.* at 844–45.

[66] *Id.*

[67] *Id.*

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scores should not be included when calculating a final grade (because that would shift the purely formative assessments to higher-stakes, summative assessments).[68] Formative assessments aim to give students an opportunity to practice new skills so they can determine whether they will have the ability or mastery to perform well on a summative exam and, ultimately, as a professional in the workplace.[69] In sum, formative assessments are meant to facilitate learning by providing feedback to: (1) students about their learning progress, and (2) professors about their teaching effectiveness.[70]

B. Background on Learning Theories

Before discussing the learning theories associated with the typical classroom practices of law professors, some background information must be established on learning theories, generally. There are three main theories regarding how people learn: behaviorism, cognitivism, and constructivism.[71] In general, "[a]s one moves along the behaviorist-cognitivist-constructivist continuum, the focus of instruction shifts from teaching to learning, from the passive transfer of facts and routines to the active application of ideas to problems."[72] This shift on the continuum is similar to moving from "what is being taught?" towards "what is being learned?" and is looking at education from a different perspective—namely, what activities students are doing in the classroom environment.[73] This idea is summed up in a pro-constructivist quote often attributed to W.B. Yeats: "Education is not the filling of a pail, but the lighting of a fire."[74] In this subpart, we look more closely at these three theories and what they highlight about the learning process.

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[68] *Id.*

[69] *Id.*

[70] *Id.*

[71] Kate E. Bloch, *Cognition and Star Trek: Learning and Legal Education*, 42 J. MARSHALL L. REV. 959, 965 (2009) ("Learning theory offers at least three well-recognized models of how people (and sometimes other species) learn: behaviorism, cognitivism, and constructivism.").

[72] Peggy A. Ertmer & Timothy J. Newby, *Behaviorism, Cognitivism, Constructivism: Comparing Critical Features from an Instructional Design Perspective*, 26 PERFORMANCE IMPROVEMENT Q. 43, 58 (2013).

[73] Michael Prince, *Does Active Learning Work? A Review of the Research*, 93 J. ENGINEERING EDUC. 223, 225 (2004) (explaining that students participating in active learning improves student learning outcomes and that active learning "leads to better student attitudes and improvements in students' thinking and writing").

[74] Strong, *supra* note 1.

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First, we have the oldest[75] of the three theories: behaviorism. For a simple definition, behaviorism is focused on the learner's response or *behavior*, when the learner is presented with certain environmental stimuli.[76] According to behaviorism, the consequences (rewards and punishments) that a learner receives based on their most recent behavior will shape future behavior.[77] This theory is further explained and supported by the processes of classical conditioning and operant conditioning.[78] A "core behaviorist belief is that learning occurs when the learner exhibits the desired response to a specific environmental stimulus."[79] A common behaviorist example would be: A dog owner says "sit" (a stimulus), the dog sits (the desired response), and a treat is then given to the dog (the reward to reinforce the behavior). Eventually, the dog owner can stop giving the reward and the dog will, likely, still sit when given the "sit" stimulus. A law school-based, behaviorist example might be: A professor presents a problem requiring an equal protections analysis (a stimulus), the student properly performs such analysis (the desired response), and the teacher gives points or affirmation (the reward to reinforce the behavior).[80] In this scenario, the focus is on the visible, *external response* of the student to the environmental stimuli, not on any invisible, internal, mental processes that allowed the student to produce the desired response.[81]

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[75] Saul McLeod, *Behaviorist Approach*, SIMPLYPSYCHOLOGY, https://www.simplypsychology.org/behaviorism.html (last updated 2017).

[76] Michael Hunter Schwartz, *Teaching Law by Design: How Learning Theory and Instructional Design Can Inform and Reform Law Teaching*, 38 SAN DIEGO L. REV. 347, 367 (2001) ("Although behaviorism has its roots in Aristotle's empiricist views, it had its greatest prominence in the first half of the twentieth century with the well-known works of Pavlov regarding classical conditioning. B.F. Skinner applied Pavlov's reinforcement ideas to teach humans to respond voluntarily to stimuli in his mid-twentieth century work on operant conditioning.").

[77] David L., *Behaviorism*, LEARNING THEORIES (Jan. 31, 2007), https://www.learning-theories.com/behaviorism.html.

[78] Schwartz, *supra* note 76, at 367.

[79] *Id.*

[80] Bloch, *supra* note 71, at 965 (using the example: "a student has learned to perform long division when, in response to a problem requiring long division (a stimulus), the student properly performs it (the desired response). . . .").

[81] *Id.*

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Ivan Pavlov conducted the most famous behaviorism experiment involving a bell and the salivation of dogs.[82] In his study, Pavlov used a bell as a stimulus and would ring it when he fed the dogs.[83] At the beginning of the experiment the bell had no effect on the salivation of the dogs.[84] However, after a sufficient number of repetitions, Pavlov rang the bell on its own—without giving the dogs food—and the dogs still salivated.[85] As most readers may recall, the bell was able to replace the food as the external stimuli that caused the response of increased salivation.[86] Hence, Pavlov concluded that humans could be conditioned to respond to stimuli in a similar way.[87] A pop culture example of this would be in the TV show, *The Office*—one character, Jim, conditioned another character, Dwight, to associate a computer sound with receiving a breath mint.[88] After a sufficient number of repetitions, Dwight ended up wanting a breath mint whenever he heard the computer sound.[89]

In the law school context, behaviorism would focus on what the professor presents to students and what the professor expects as a response to the stimuli presented. There are a variety of possible rewards and punishments in a law school setting, but the most common would likely be verbal affirmations or corrections and high or low exam grades. The professor would be primarily engaged in creating and adjusting the various environmental stimuli, rewards, and punishments so students gain practice producing the desired responses to the stimuli. Overall, behaviorism is most concerned with what is visible as a response to the stimuli: not on learning processes or mental models being used inside the learner's brain.[90]

Next, we have cognitivism. Cognitivism is the second oldest of the three theories and was developed in response to the perceived shortfalls of behaviorism.[91]

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[82] Saul McLeod, *Pavlov's Dogs*, SIMPLYPSYCHOLOGY, https://www.simplypsychology.org/pavlov.html (last updated 2018).

[83] *Id.*

[84] *Id.*

[85] *Id.*

[86] *Id.*

[87] *Id.*

[88] *Pavlov Experiment*, DUNDERPEDIA: THE OFFICE WIKI, http://theoffice.wikia.com/wiki/Pavlov_Experiment (last visited Mar. 2, 2018).

[89] *Id.*

[90] Bloch, *supra* note 71, at 965.

[91] Ertmer & Newby, *supra* note 72, at 50–51.

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Many psychologists felt that behaviorism did not adequately explain or acknowledge internal cognitive processes like: knowledge, attention, memory, evaluation, problem solving, decision making, comprehension, and the production of language, and, thus, cognitivism is more focused on these aspects of learning.[92] Like behaviorism, cognitivism acknowledges the large role that external stimuli play in facilitating learning.[93] Indeed, "[i]nstructional explanations, demonstrations, illustrative examples and matched non-examples are all considered to be instrumental" from both the behaviorist and cognitivist perspectives.[94] Additionally, student practice and corrective feedback during the learning process remain large points of focus under both the behaviorist and cognitivist theories.[95]

However, the mental activities of the learner are seen and valued quite differently from a cognitivist perspective.[96] Unlike behaviorists, cognitivists acknowledge mental activities of the learner prior to the learner producing any visible responses to stimuli.[97] For example, cognitivists acknowledge the "mental planning, goal-setting, and organizational strategies" used by the learner in forming their response to the stimuli.[98] Cognitivists argue that external stimuli, such as environmental factors or instructional aids, simply cannot account for all that occurs when a person is interacting with such stimuli; cognitivists believe there must be some other invisible processes occurring.[99] Thus, what learners "attend to, code, transform, rehearse, store and retrieve," a learner's mindset,[100] "thoughts, beliefs, attitudes, and values are also considered to be influential in the learning process."[101] In a law school setting, a cognitivist-based professor would have the added benefit of a framework that allows for analyzing the learners' various thought processes, mental models, mental states, and prior experiences to better inform the professor in

[92] *Id.* at 50–54.

[93] *Id.* at 51.

[94] *Id.*

[95] *Id.*

[96] *Id.*

[97] *Id.*

[98] *Id.*

[99] *Id.* at 51–52.

[100] *Decades of Scientific Research that Started a Growth Mindset Revolution*, MINDSET WORKS, https://www.mindsetworks.com/science/ (last visited Mar. 1, 2018).

[101] Ertmer & Newby, *supra* note 72, at 52.

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the creation and modification of external stimuli, in hopes of finding the ideal mix of external stimuli for each learner that would produce the desired response.[102]

Finally, we come to the youngest[103] of the three theories, constructivism. Jean Piaget, one of the founders of constructivism, wanted to explain how children *construct* their mental models, or "schemas," as they interact with the world, learn, and grow.[104] Piaget "disagreed with the idea that intelligence was a fixed trait, and regarded cognitive development as a *process* which occurs due to biological maturation and interaction with the environment."[105]

In the 1920s, Piaget's job was to create French versions of questions from English intelligence tests.[106] While testing his questions, Piaget became increasingly curious about the reasons children gave for their wrong answers to questions that required logical thinking.[107] He believed those wrong answers revealed significant differences in the invisible mental models or schemata, of adults and children.[108] After further research, he developed and proposed four stages of cognitive development in which schemas increase in level of sophistication as one ages.[109] The four developmental stages of constructivism are: sensorimotor (birth to age two), pre-operational (age two to age seven), concrete operational (age seven to age eleven), and formal operational (puberty age and, generally, into adulthood).[110]

Experts criticize this last stage (Piaget included) and generally state "that progression from concrete to formal operations may not be an automatic, genetically pre-programmed event, and may have to be prodded a little with experience and

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[102] Wallace J. Mlyniec, *Where to Begin? Training New Teachers in the Art of Clinical Pedagogy*, 18 CLINICAL L. REV. 505, 527 (2012) ("Our maturing understanding of clinical pedagogy, informed by learning theory regarding multiple intelligences and differences in student learning patterns, makes clear that not all students learn in the same manner.").

[103] Saul McLeod, *Jean Piaget's Theory of Cognitive Development*, SIMPLYPSYCHOLOGY, https://www.simplypsychology.org/piaget.html (last updated 2015).

[104] *Id.*

[105] *Id.* (emphasis added).

[106] *Id.*

[107] *Id.*

[108] *Id.*

[109] *Id.*

[110] *Id.*

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practice."[111] Experts also state "that it is possible for a person to have reached the level of formal operations in one knowledge domain but not in another, thus being able to think abstractly about ethics and morality but not about chemistry and physics, or vice versa."[112]

Therefore, in a law school setting, one would likely, but not necessarily, observe students in the formal operational stage of development as viewed through Piaget's constructivist perspective.[113] As such, some of the students entering law school may need "to be prodded a little with experience and practice" in order to fully enter the formal operational stage of development with regard to the specific domain of legal reasoning.[114] Indeed, this final stage of development describes when people develop the capacity to think about abstract concepts within specific domain areas and to test hypotheses in a disciplined manner.[115]

From the constructivist perspective, one arrives at this final stage only after developing a complex set of schemata for dealing with the myriad situations encountered in the world.[116] The individual schema can be thought of as separate "units of learning," or "index cards," that are filed away in a person's brain.[117] Each schema, or index card, tells an individual how to react to a specific instance or pattern of environmental stimuli, or other external information.[118] As a person grows and explores the world, they add, edit, or delete schema in order to more effectively interact with their surroundings.[119]

In a law school setting, this looks like each learner bringing his or her own personal, lifetime set of schemata into the learning environment in an attempt to edit, delete, or add to them. After a sufficient number of iterations interacting with and obtaining feedback from professors, professionals, and other students, these learners

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[111] Greg Doheny, *An Evidence-Based Approach To Science Education (Or: Dr. Hattie, And How I Learned To Stop Worrying And Love The Numbers*.), SCIENCE 2.0 (Apr. 25, 2011), https://www.science20.com/cognitive_load_management_medical_education/evidencebased_approach_science_education_or_dr_hattie_and_how_i_learned_stop_worryi.

[112] *Id.*

[113] *Id.*

[114] *Id.*

[115] McLeod, *supra* note 103.

[116] *Id.*

[117] *Id.*

[118] *Id.*

[119] *Id.*

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will (hopefully) have updated enough of their individual schema such that they end up graduating from law school, passing the bar exam, and, eventually, having people call them "lawyers."

In sum, learning theories have progressed from 1) focusing solely on adjusting external stimuli presented to students to help students achieve the desired response (behaviorism), to 2) soliciting and analyzing students' thought processes to better inform adjustments made to external stimuli to help students achieve a desired response (cognitivism), to 3) analyzing individual learners and guiding each one in how to best alter or develop their schema to successfully interact with typical patterns of stimuli encountered in the world (constructivism).

C. Learning Theories Associated with Common Methodologies

In associating the above learning theories with current, common methodologies, we must first elicit the general characteristics inherent in these common methodologies and determine where such characteristics fall on the behaviorist-cognitivist-constructivist continuum. Generally, if a professor is performing most of the actions in a classroom (like lecturing students without questioning them), the teaching method will fall towards behaviorism and will be considered a more "passive" form of teaching and learning.[120] Conversely, if the learner or multiple learners are performing most of the actions (like during a cooperative learning activity or a debate, for example),[121] the overall teaching method will fall towards constructivism and will be considered a more "active"[122] form of teaching and learning. The classification of teaching methods is dependent

[120] David L., *supra* note 77 ("Behaviorism is a worldview that assumes a learner is essentially passive, responding to environmental stimuli.").

[121] *See* Gerald F. Hess et al., *Fifty Ways to Promote Teaching and Learning*, 67 J. LEGAL EDUC. 696, 725 (2018) ("Teaching inventories adapted to legal education can help teachers assess their performance in relation to seven articulated principles for enhancing learning: promoting student-faculty contact; articulating clear, high expectations; using time effectively; respecting differences among students; fostering cooperation among students; providing prompt feedback; and encouraging active learning."); Jennifer L. Faust & Donald R. Paulson, *Active Learning in the College Classroom*, 9 J. EXCELLENCE C. TEACHING 3, 4 (1998) ("The term cooperative learning covers the subset of active-learning activities that students do in groups of three or more, rather than alone or in pairs. Cooperative-learning techniques generally employ formally structured groups of students assigned to complex tasks, such as multiple-step exercises, research projects, or presentations.").

[122] *Active Learning*, CAMBRIDGE ASSESSMENT INT'L EDUC., http://www.cambridgeinternational.org/images/271174-active-learning.pdf (last visited Apr. 4, 2019) ("Active learning is based on a theory of learning called constructivism, which emphasizes [sic] the fact that learners construct or build their own understanding. Learning is a process of making meaning.").

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on each classroom activity and on the proper execution of a teaching method by the professor; as classroom variables change, a teaching method that was considered passive at one point in a class may be more active at a different point.[123] For example, the case method, if not properly executed, often morphs into passive lecture for most professors.[124] This would shift the teaching method from active learning and constructivist towards passive learning and behaviorist. Conversely, a lecture that includes effective questioning, discussion, debate, graphic organizers, visual aids, and group activities or practice problems would generally shift away from passive learning and behaviorism towards active learning and constructivism.

In classifying the case method of Langdell, one must look to how the technique is used in its truest form. The method typically involves a back-and-forth Socratic dialogue between a single student and the professor.[125] This interaction is usually rather active, and the case method, if used with Socratic dialogue, would fall towards constructivism, or active learning.[126] Lecturing, however, the default teaching method for many law professors,[127] falls towards the behaviorist side of the

[123] STEPHEN PETRINA, CURRICULUM AND INSTRUCTION FOR TECHNOLOGY TEACHERS 128 (2004) (explaining that "general models help us to classify teaching methods and simplify our discourse for conversing about them. We also group methods by their 'family' affiliations. Some methods lend themselves to . . . information processing . . . behavioral modification . . . intrapersonal and interpersonal development. Each of these families offers different approaches to teaching, respond to different objectives and goals, and yield different results in students.").

[124] Larry A. DiMatteo, *Contract Stories: Importance of the Contextual Approach to Law*, 88 WASH. L. REV. 1287, 1294 (2013) ("It should be acknowledged that many law professors have forsaken the Socratic method for general lecture and discussion formats. . . ."); Jeffrey D. Jackson, *Socrates and Langdell in Legal Writing: Is the Socratic Method a Proper Tool for Legal Writing Courses?*, 43 CAL. W. L. REV. 267, 271 (2007) ("Rather, the Socratic method was the 'engine' Langdell chose to power his case method; however, even he did not use the Socratic method exclusively, and in his later stages of teaching, abandoned it altogether for a lecture format.").

[125] Burke, *supra* note 47, at 29.

[126] 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, 215 (2014) ("A few scholars argue that the Socratic method encourages active learning, because law students are required to 'read the material and think critically about the material before class so that they can respond if called upon' as well as 'actively follow the dialogue between the professor and the answering student.'"). *But see* Michael J. Cedrone, *The Developmental Path of the Lawyer*, 41 CAP. U. L. REV. 779, 835 (2013) ("Thus, the purported active learning of the archetypical Socratic classroom has given way to passive listening in the neo-Socratic classroom. This passive listening is further exacerbated by common practices that occur when the Socratic method is poorly executed.").

[127] Wangerin, *supra* note 54, at 213–14 (2003) ("[A]nyone who has conducted 'action research' studies of classroom teaching in law schools—knows that what occurs in many of them is precisely what so many teachers deny is happening, namely, *lots and lots of lecture teaching*.") (emphasis added); Matamoros,

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continuum.[128] Indeed lecturing in law school, even with a PowerPoint slideshow, is still a passive teaching method as the students are not engaging or "constructing" any of their own knowledge by interacting with the material, the professor, or each other—they are not actively altering their schema.[129] Question-and-answer sessions,[130] in-class debates,[131] and practice problems or exercises[132] all fall towards active learning and the constructivist side of the continuum because student interaction is required for these methods to function. However, the execution of these methods can greatly influence how many students are actively engaging with a given learning activity.

In terms of associating common assessment methods with learning theories, one must look at the assessment's nature and purpose to determine where it would fall on the behaviorist-cognitivist-constructivist continuum. Summative assessments measure learning after the fact and do little more than measure the knowledge state of students at the end of a course.[133] Professors do not often use summative assessments for the purpose of altering teaching methods during a given class or revisiting certain concepts that are confusing to students.[134] To build off Yates, professors often employ summative assessments to simply measure which buckets held the most water by the end of the semester's rainstorm. The fullest buckets are then "rewarded" with the highest grades for being able to hold the greatest amounts

supra note 54, at 113 ("The increasing emphasis on legal skills sheds light on an interesting paradox within legal education; in legal skills courses—those that best lend themselves to active learning experiences—instructors *frequently fill valuable classroom time with passive lectures*. . . .") (emphasis added).

[128] Ertmer & Newby, *supra* note 72, at 58.

[129] Joseph T. DiPiro, *Why Do We Still Lecture?*, 73 AM. J. PHARM. EDUC. 137, 137 (2009) (explaining differences between education and practice in that, "[t]he passive lecture and Powerpoint bullet-slide approach to teaching would be acceptable if the knowledge required to practice were static, and if memorization were the key to successful practice. . . .").

[130] Burke, *supra* note 47, at 29.

[131] Ryan et al., *supra* note 56, at 348.

[132] Mitchell, *supra* note 57, at 353.

[133] Terry, *supra* note 60, at 477–78 (citing GREGORY S. MUNRO, OUTCOMES ASSESSMENT FOR LAW SCHOOLS 35–36 (2000) ("Thus, the typical end-of-the-semester law school examination is summative because it 'measure[s] student learning after the fact' and is 'seldom used as a diagnostic tool or instructional device for student learning during the course.'")).

[134] Andrew Miller, *Formative Assessment Is Transformational!*, EDUTOPIA (Feb. 3, 2015), https://www.edutopia.org/blog/formative-assessment-is-transformational-andrew-miller ("Summative assessments . . . are often assessments *of* learning," rather than *for* learning.).

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of water when compared to the rest of the buckets. Fixing leaks or dents in other buckets is not of primary concern, and, usually, the buckets do not know how to fix themselves, and are often unaware that they have cracks or dents. This makes summative assessments more aligned with passive learning and behaviorism and does nothing to address the knowledge gap between the highest and lowest achievers in a class.

In contrast, formative assessments are more active in that the feedback is intended to change both the actions of the learners and the actions of the professor.[135] Indeed, formative feedback, if used throughout a lesson or course, should affect the progress of that lesson, or course.[136] "[F]ormative assessments are *for* learning, not necessarily *of* it."[137] As such, formative assessments are associated with active learning and constructivism.

D. Effectiveness of Common Methodologies

Critics of Langdell's case method correctly argue that the only student truly engaged in a Socratic, case method discussion is the one answering the questions, and that the method can cause unhealthy levels of anxiety in all of the other students.[138] Furthermore, Langdell's case method often devolves into a simple, passive, lecture format for most law professors,[139] and research shows that lecture is not as effective as other teaching methods.[140] Further criticism of the case method

[135] *Id.* (discussing that "formative assessment practices can change how you teach, how your students learn, and how your classroom functions.").

[136] *Id.*

[137] *Id.*

[138] Jonathan K. Van Patten, *Skills for Law Students*, 61 S.D. L. REV. 165, 167 (2016) (citing PAUL CAMPOS, DON'T GO TO LAW SCHOOL (UNLESS): A LAW PROFESSOR'S INSIDE GUIDE TO MAXIMIZING OPPORTUNITY AND MINIMIZING RISK 10 (2012) ("The so-called 'Socratic method,' which involves a professor cold-calling a randomly chosen student and quizzing the student about the facts of an appellate court case, is an absurdly inefficient way to teach people about law. It fills the first-year classroom with significant amounts of fear and anxiety, which anyone who knows anything about educational theory will tell you are exactly things you want people not to experience when they're trying to learn something. And it fills upper level classes with boredom and detachment, as everyone but the student on the spot zones out and surfs the internet on their laptops.")).

[139] Russell L. Weaver, *Langdell's Legacy: Living with the Case Method*, 36 VILL. L. REV. 517, 545 (1991) ("At most law schools, all faculty tend to lecture to some extent, and some faculty teach predominately by the lecture method.").

[140] Scott Freeman et al., *Active Learning Increases Student Performance in Science, Engineering, and Mathematics*, 111(23) PNAS 8410, 8410 (2014), https://www.pnas.org/content/pnas/111/23/8410.full.pdf (explaining that "[t]he studies analyzed here document that active learning leads to increases in

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highlights the fact it is "not adequately preparing students for law practice and [is] not, in fact, an adequate substitute for apprenticeships,"[141] which are closer to the constructivist side of the continuum.[142] The Socratic method, used as an integral part of Langdell's case method, falls to similar criticisms: only one student at a time is engaged in the discussion, the learning environment is undermined by the risk of students being made to look foolish in front of their peers, and the method is ill-suited to helping students individually practice the skills of problem solving and analyzing.[143] Question and answer formats, discussions, and debates are all more active teaching and learning methods,[144] but the execution of these methods is very important for them to remain active[145]—professors must guard against reverting to lecture. If only one or two students are engaged at a time the method is not as "active," or effective, as it could be.[146] In sum, active learning is more effective than

examination performance that would raise average grades by a half a letter, and that failure rates under traditional lecturing increase by 55% over the rates observed under active learning," and that "students in classes with traditional lecturing were 1.5 times more likely to fail than were students in classes with active learning."); Prince, *supra* note 73, at 225 ("[D]iscussion, one form of active learning, surpasses traditional lectures for retention of material, motivating students for further study and developing thinking skills.").

[141] Burke, *supra* note 47, at 29.

[142] ALICE Y. KOLB & DAVID A. KOLB, EXPERIENTIAL LEARNING THEORY, ENCYCLOPEDIA OF THE SCIENCES OF LEARNING 1234 (Norbert M. Seel et al. eds., 2012), https://link.springer.com/content/pdf/10.1007%2F978-1-4419-1428-6_227.pdf ("[T]he instructional approaches typically used in schools render key aspects of expert practice invisible to learners; a cognitive apprenticeship approach makes the strategies underlying expert practice explicit. Methods useful in a cognitive apprenticeship approach include cognitive modeling, coaching, and scaffolding. These methods allow novices to observe and compare their cognitions with those of the expert in order to develop and apply the same knowledge and skills as the expert.").

[143] Mell, *supra* note 47, at 46 ("The Socratic method can engender alienation and foster a lack of self-confidence in those students subjected to its perceived bullying. Criticism of the method gained momentum as women and minorities entered law schools in larger numbers and found the Socratic method environment hostile to learning. The Socratic method and its supposed abuses were cited as being partly responsible for the underperformance of women law students.").

[144] Michelle Schwartz, *Active Learning*, RYERSON U., https://www.ryerson.ca/content/dam/lt/resources/handouts/activelearning.pdf (last visited Mar. 7, 2018).

[145] *Id.* ("For learning to be active, students must do more than listen, they must 'read, write, discuss, or be engaged in solving problems. Most important, to be actively involved, students must engage in such higher order thinking tasks as analysis, synthesis, and evaluation.' Students must be doing things, and then thinking about why they are doing them.").

[146] *Making Active Learning Work*, U. MINN.: CTR. EDUC. INNOVATION, www.sarahnilsson.org/app/download/964994291/active+learning.docx (last visited Mar. 6, 2018) ("Just because students are 'active' (i.e., talking to one another or engaging in some other activity) doesn't necessarily mean they will learn

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passive learning,[147] and all professors should strive to have every student engaged in a lesson for the lesson to be most effective.[148]

Whether formative or summative, the appropriateness and effectiveness of a given assessment method depends, in large part, on the *proper alignment* between the assessment, the learning objectives, and the teaching methods used by the professor during class.[149] Indeed, to use another metaphor, judging a fish by its ability to climb a tree does not make much sense,[150] especially if you spent the whole semester teaching the fish how to climb trees by painting pictures of fish climbing trees. "Assessments should reveal how well students have learned what we want them to learn while instruction ensures that they learn it," and "for this to occur, assessments, learning objectives, and instructional strategies need to be closely aligned so that they reinforce one another."[151]

To properly align these components, professors can consider several questions: "What do I want students to know how to do. . . ? What kinds of tasks will reveal whether students have achieved the learning objectives. . . ? What kinds of activities in and out of class will reinforce my learning objectives and prepare students for assessments?"[152] If the assessment method is not aligned with the objectives of the

anything. Simply putting students in groups doesn't constitute active learning. Any activity you choose must be well planned and executed.").

[147] Aatish Bhatia, *Active Learning Leads to Higher Grades and Fewer Failing Students in Science, Math, And Engineering*, WIRED (May 12, 2014), https://www.wired.com/2014/05/empzeal-active-learning/ (questioning whether active learning was more effective than passive learning, the "answer is a resounding yes. According to Scott Freeman, one of the authors of the new study, 'The impact of these data should be like the Surgeon General's report on 'Smoking and Health' in 1964—they should put to rest any debate about whether active learning is more effective than lecturing.'").

[148] Prince, *supra* note 73, at 223 ("The core elements of active learning are student activity and engagement in the learning process. Active learning is often contrasted to the traditional lecture where students passively receive information from the instructor.").

[149] *Why Should Assessments, Learning Objectives, and Instructional Strategies be Aligned?*, EBERLY TEACHING EXCELLENCE & EDUC. INNOVATION, CARNEGIE MELLON U., https://www.cmu.edu/teaching/assessment/basics/alignment.html (last visited Mar. 2, 2018) [hereinafter EBERLY].

[150] *Everybody is a Genius. But If You Judge a Fish by Its Ability to Climb a Tree, It Will Live Its Whole Life Believing that It is Stupid*, QUOTE INVESTIGATOR (Apr. 6, 2013), https://quoteinvestigator.com/2013/04/06/fish-climb/ (explaining that the quote is often attributed to Albert Einstein, but that there remains some uncertainty).

[151] EBERLY, *supra* note 149.

[152] *Id.*

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course or with the teaching methods, it can undermine student motivation and learning.[153]

Consider this example: "Your objective is for students to learn to *apply analytical skills*, but your assessment measures only *factual recall*. Consequently, students hone their analytical skills and are frustrated that the exam does not measure what they learned."[154] In this example, students understood and might have met the course objective—the application of analytical skills—presuming those were also the skills practiced in the classroom using teaching strategies that supported the development of such skills, but there was a misalignment between what the students learned and practiced and what was measured.

Now, consider this example: "Your assessment measures students' ability to *compare and critique* the arguments of different authors, but your instructional strategies focus entirely on *summarizing* the arguments of different authors. Consequently, students do not learn or practice the skills of comparison and evaluation that will be assessed."[155] Similarly, this example shows that the assessment measured something different from how the professor covered the material in class. Once properly aligned with teaching methods and learning outcomes, the effectiveness of formative and summative assessments can be compared with how well they improve student learning outcomes.

Overall, formative assessment has a greater positive impact on student achievement than summative assessment because the purpose of formative assessment is to change what the learner does in class and how the professor teaches the material.[156] By providing learners with specific feedback in how they are

[153] *Id.*

[154] *Id.*

[155] *Id.*

[156] HERMAN, *supra* note 44 ("The researchers concluded that formative assessment had an effect size of between .4 and .7 on standardized tests, making it demonstrably one of the most effective educational interventions in practice, particularly for low achieving students."); HANOVER, *supra* note 44 ("[F]indings indicate that students who receive formative assessment perform better on a variety of achievement indicators than their peers do."); I'Anson, *supra* note 44 ("Formative assessment improves student achievement. It has been proven in countless research studies, conducted over the past decade, to be one of the most effective instructional tools to positively influence student achievement."); COUNCIL OF TEACHERS, *supra* note 44 ("Formative assessment produces greater increases in student achievement and is cheaper than other efforts to boost achievement, including reducing class sizes and increasing teachers' content knowledge."); Djuricich & Christensen, *supra* note 44 (discussing formative assessment; "Assessment *for* learning has the potential to make everyone better, shifting the bell curve to the right for all learners.").

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progressing, and tips on what they could do differently, professors and teaching assistants are assisting them in modifying their schema (referring to Piaget's constructivism). Summative assessments, if used normally, do not give students any feedback during the learning process, and if the summative assessment does provide feedback, it is often a simple number or letter grade to show the student how much they retained by the end of the course—rather than timely, detailed, individualized feedback that could have been used to construct or edit schema.[157]

PART III

A. Ways Legal Education Can Move Forward

The problem with choosing an "effective" teaching method is that almost everything professors do has been shown to have *some* positive affect on student learning.[158] The question becomes, then, which teaching methods *work better* than others, and *by what measure* do we know these methods work more effectively? What should be the cutoff point for considering methods that *truly* make a difference in student learning outcomes?

In 2009, educational researcher John Hattie answered these questions when he reviewed over 800 meta-analyses containing over 52,000 original studies on the impact of teaching methods (and other variables) on K-12 student learning.[159] He added to these findings in 2015 by evaluating another 400 meta-analyses studying the effects of teaching methods used in higher education.[160] After review, Hattie ranked the teaching methods, or variables, based on their effect sizes, that is "the difference between the means of the study and control groups divided by the standard deviation of the study."[161] This "meta-meta-analysis" on the effectiveness of teaching methods provided many educators with a new and exciting way to view and measure the effect of teaching practices on student learning outcomes.[162] Effect size

[157] Terry, *supra* note 60, at 491 (citing Roy Stuckey, *Can We Assess What We Purport to Teach in Clinical Law Courses*?, 9 INT'L J. CLIN. LEGAL EDUC. 9, 24–25 (2006) (observing that assessments are "seldom used as a diagnostic tool or instructional device for student learning during the course.").

[158] Doheny, *supra* note 111.

[159] *Id.*

[160] John Hattie, *The Applicability of Visible Learning to Higher Education*, 1 TCHR.-READY RES. REV. 79, 79 (2015), http://result.uit.no/basiskompetanse/wp-content/uploads/sites/29/2016/07/Hattie.pdf.

[161] Doheny, *supra* note 111.

[162] *Id.*

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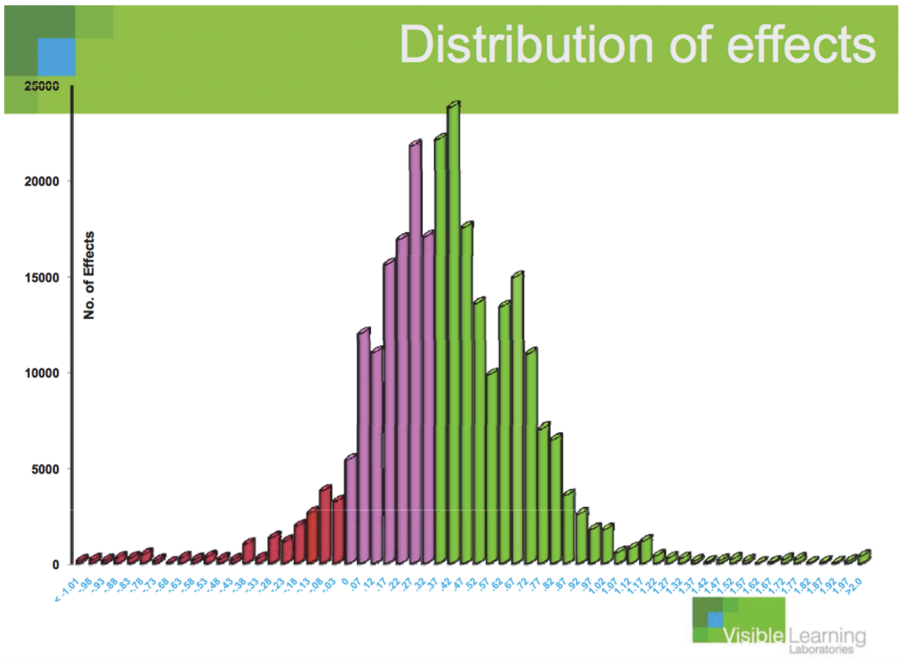
can simply be thought of as the measurable effect a certain teaching method or activity has on student learning outcomes. Once Hattie plotted these effect sizes, he found that 0.40 (also referred to as *d*=0.40) was the average effect size.[163] Thus, he concluded that the mean value, 0.40, represents the benchmark threshold.[164] An effect size of 0.40 as the mean "suggests that an effect size threshold of zero may be meaningless," and "[t]o be taken seriously as a superior teaching method, a technique must have an effect size greater than 0.40."[165] Of the variables Hattie reviewed, there were some that showed negative effect sizes, like the effect of summer vacation on

[163] JOHN HATTIE, VISIBLE LEARNING, TOMORROW'S SCHOOLS, THE MINDSETS THAT MAKE THE DIFFERENCE IN EDUCATION (2009), http://www.vs-kombre.kk.edus.si/komercialist/visiblelearning.pdf (see below for an image from Hattie's 2009 presentation. The 52,000 educational studies and their associated teaching methods are plotted based on their effect sizes, or levels of effectiveness, with the most effective methods to the right and the least effective to the left. Notice that some on the left are negative values, indicating that they harm student learning outcomes.).



[164] Doheny, *supra* note 111.

[165] *Id.*

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student learning (-0.09).[166] However, two of the top three most effective practices (based on effect size) were: Piagetian programs (1.28) and providing formative assessments (0.90).[167] An effect size of 0.80 means that a teaching method is twice as effective as the "average" teaching method, and an effect size of 1.20 means that a method is three times as effective. The positive impact of formative assessment has been discussed throughout this Note, and many resources have been provided to support this finding in the footnotes. Thus, formative assessments will not be the focus moving forward. Instead, "the astounding effect size of *d*=1.28, seen when so-called Piagetian Programs are used . . . may just qualify as the atom bomb of . . . education theory"[168] and will be the last focal point as a way for legal education to move forward.

Piagetian programs, aligning nicely with the previously-mentioned active learning methods and with the educational theory of constructivism, "take into account the fact that a first or second year university . . . teacher will have a mixture of students, many of whom have not yet reached the stage of formal operations, and incorporate exercises that begin with the concrete and proceed to the theoretical to help this progression"[169] into the formal, operational, final stage of Piaget's framework. These Piagetian programs share common characteristics:

> First, students are engaged through activation of a schema. Basically, setting the stage for learning something new by invoking things they already know. Second, students do an experiment where they are allowed to "mess around" with a concrete phenomenon. Third, an extensive class or tutorial discussion or activity takes place where students attempt to make sense of what they've seen. This is the most critical stage, and must include scaffolding, guided questioning, modeling, shaping, concept mapping and so on. Finally, having developed a set of principles or a theory, students are made to apply the theory to a novel problem or situation.[170]

These Piagetian methods all necessarily incorporate formative feedback, can be quickly learned by professors and teaching assistants, and can be put into place with

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[166] JOHN HATTIE, VISIBLE LEARNING: A SYNTHESIS OF OVER 800 META-ANALYSES RELATING TO ACHIEVEMENT app. B (2009), http://boe.mine.k12.wv.us/Downloads/Hattie_Meta_Analysis_Ranking.pdf (displaying a ranked list of the teaching methods).

[167] *Id.*

[168] Doheny, *supra* note 111.

[169] *Id.*

[170] *Id.*

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relative ease after training. This teaching method actively guides students through the process of editing their schema, and is another way law schools can move forward.

B. Direct Suggestions and First Steps

Allowing the ABA Standards to set the floor, the following suggestions and first steps will go beyond the minimum of what the Standards require and point towards what law schools can, and should, do to measurably improve the effectiveness of legal education.

1. **Use formative assessments in every course**: Using several ungraded formative assessments throughout a course is best practice. Additionally, professors should start each course by using an ungraded pre-test, ideally one that provides timely and individualized written feedback to each student. This should be followed by a (possibly graded) midterm-test that provides written feedback to each student. Each course should end with a normal, summative, final exam. Professors should conduct a statistical analysis of the results including the standard deviation values, the effect sizes, etc. so they can reflect on their teaching methods. If more than one professor is teaching the same course they should be giving the same tests to students and covering the same material so that the professors can compare results with one another and experiment with different classroom activities. This information should never be used as a weapon to threaten professor tenure or pay.

2. **Use more active learning methods in every course**: Pay attention to what students are doing most of the time in their courses. If students are sitting quietly professors should do something to change that. Implement Piagetian programs, provide more timely and individualized feedback, and help students construct or edit their schema. Use more whole-class participation with questions and answers, for example: real-time polling system to increase overall student engagement, increase use of informal debates, think-pair-share activities, free-writings, idea survivor games, GIST writing activities, etc.

3. **Use teaching assistants in every course**: Students can help other students learn. Teaching assistants can further assist by creating, administering, and grading formative assessments, and can help other students edit or construct schema by visually mapping out concepts, explaining how to analyze a problem or properly think about an issue, or debating an argument or perspective to tease out nuances in a given concept. All teaching assistants should be given basic training in learning theories and teaching practices either by the professors or by educational experts.

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4. **Partner with a nearby educational institution**: Partner with educational experts and invite them into law school classrooms. Ask for their guidance in how to improve the school's educational programs—many of these experts have advanced degrees in educational assessment and measurement, curricular theory and design, educational philosophy and policy, teaching methodologies, etc. They can help implement many of these changes. Keep track of the school's progress.

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