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Learning Without Grade Anxiety: Lessons from the Pass/Fail Experiment in North American J.D. Programs

JOHN BLISS & DAVID SANDOMIERSKI*

The notion of a well-being crisis among law students is more than an anecdotal concern. Empirical research has shown that students tend to enter J.D. programs with typical mental health and then rapidly decline over the course of the first year.¹ This decline is found across metrics of subjective well-being, including positive affect, life satisfaction, self-determination, and intrinsic motivation.² Moreover, studies find that law students have elevated rates of chronic anxiety, depression, social alienation, substance abuse, and suicide.³ In short, law students experience “major psychological distress” during their legal education.⁴ Why might this be the case? An intuitive answer, backed by a substantial literature, is that this distress is largely tied

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1. Lawrence S. Krieger, *Institutional Denial about the Dark Side of Law School, and Fresh Empirical Guidance for Constructively Breaking the Silence*, 52 J. LEGAL EDUC. 112, 114 (2002).

2. Krieger, *supra* note 1, at 114.

3. Rachael Field & Sally Kift, *Addressing the High Levels of Psychological Distress in Law Students Through Intentional Assessment and Feedback Design in the First Year Law Curriculum*, 1 INT. J. FIRST YEAR HIGHER EDUC. 65, 66-67 (2010) (concluding that legal education may tend to exacerbate “depression, obsessive compulsive behavior, feelings of inadequacy and inferiority, anxiety, hostility, paranoia, and social alienation and isolation”, and finding that law students’ rates of psychological distress are 20% higher than those experienced by non-law students).

4. Krieger, *supra* note 1, at 114.

to the “competitive, isolating and adversarial” nature of legal education,⁵ with one leading culprit in particular: grading.⁶ The curved, hierarchical grading system used by most law schools may tend to foster among students a chronic and deleterious experience of “grade anxiety.”⁷ So, what would happen if law school grades suddenly disappeared?

This article empirically examines just such a scenario—the rare experiment in the history of legal education that occurred in Spring 2020 when law schools across North America adopted Pass/Fail grading in response to the emergent COVID-19 pandemic.⁸ Such an experiment could produce a variety of effects.⁹ In this article, we examine two hypotheses: (1) that Pass/Fail grading enhances student well-being; and (2) that Pass/Fail grading diminishes student learning by removing a crucial incentive to motivate student effort.¹⁰ We examine these hypotheses through the lens of a survey conducted at two time periods, during and after the Spring 2020 term. Students and faculty from a wide range of North American law schools responded to the survey in large numbers and invested a great deal of time in their multiple-choice answers and their remarkably detailed responses to open-ended questions. This study provides a unique opportunity to examine grading practices through empirical data and the voices of students and faculty.

Across our sample, we find that Pass/Fail grading tremendously alleviated student anxiety.¹¹ This quantitative finding is supported by qualitative responses, where students provided experiential detail about how Pass/Fail grading improved their well-being, their ability to balance their lives, their enhanced relationships with peers, and their availability for important familial roles including parenting. Thus, within the limitations of our sample, we find support for our first hypothesis: Pass/Fail grading

5. Field & Kift, *supra* note 3, at 66; Gerald F. Hess, *Heads and Hearts: The Teaching and Learning Environment in Law School*, 52 J. LEGAL EDUC. 75, 75-76 (2002); Roy E. Rickson, *Faculty Control and the Structure of Student Competition: An Analysis of the Law Student Role*, 25 J. LEGAL EDUC. 47, 52 (1973).

6. See, e.g., WILLIAM M. SULLIVAN ET AL., EDUCATING LAWYERS: PREPARATION FOR THE PROFESSION OF LAW 31 (2007) (observing that student anxiety is exacerbated by law school grading practices, which foster a “competitive classroom climate”).

7. Krieger, *supra* note 1, at 124-25 (finding that the competition and isolation perpetuated by the grading system creates intense stress in the student population and a contingent sense of self-worth, such that students are encouraged to evaluate themselves according to whether they are better or worse than their peers).

8. See *infra* Part I.

9. See David Sandomierski, John Bliss & Tayzia Collesso, *Pass for Some, Fail for Others: Law School Grading Changes in the Early Covid-19 Pandemic* (forthcoming) (exploring how students, including students of historically underrepresented backgrounds, might be disadvantaged under Pass/Fail because of the lack of opportunity to demonstrate merit to employers).

10. See *infra* Parts II-III.

11. See *infra* Part II.

appears to generally enhance student well-being, at least in the context of the early COVID-19 pandemic.

However, we find very limited support for our second hypothesis—that Pass/Fail grading diminishes student learning.¹² Students reported their learning at close to normal rates, with even more favorable accounts in our follow-up survey after the Spring 2020 exam period. On average, students acknowledged slightly diminished effort in the first survey, although this finding disappeared in the second survey when they reflected back on the spring term and exam period. Similarly, faculty members reported student performance to be more or less the same as normal, and again, their reports grew more favorable as time progressed.

Moreover, in the qualitative responses, students emphasized that the Pass/Fail system enabled “real”, “true”, or “deep” learning, which several respondents described as “learning for learning’s sake.”¹³ This finding is generally consistent with findings in the education literature, which have raised concerns about how hierarchical grading undermines deeper comprehension,¹⁴ lifelong learning,¹⁵ intrinsic motivation,¹⁶ and the pursuit of mastery.¹⁷ In our study, students associated these learning benefits with an apparent improvement in well-being and a slight reduction in effort. This leads us to suggest that grading policies designed to reduce anxiety – and even to moderate effort – might produce better conditions for cognitive performance and result in better learning outcomes for students.

What is particularly interesting about the open-ended responses is how frequently students volunteer these learning virtues without being prompted to do so—far exceeding the faculty respondents in this regard. Indeed, we

12. See *infra* Part III.

13. See *infra* Part III.B.

14. See generally Chris McMorran, Kiruthika Ragupathi & Simei Luo, *Assessment and Learning Without Grades? Motivations and Concerns with Implementing Gradeless Learning in Higher Education*, 42 *ASSESSMENT & EVALUATION IN HIGHER EDUC.* 361 (2017); James A. Eison, *A New Instrument for Assessing Students’ Orientations Toward Grades and Learning*, 48 *PSYCHOL. REP.* 919 (1981); Alfie Kohn, *Grading – The Issue Is Not How but Why*, 69 *EDUC. LEADERSHIP* 38 (1994); Linda Malam & Carl Grundy-Warr, *Liberating Learning: Thinking Beyond ‘The Grade’ in Field-Based Approaches to Teaching*, 67 *NEW ZEALAND GEOGRAPHER* 213 (2011); Mike Brilleslyper et al., *What’s the Point? The Benefits of Grading Without Points*, 22 *PRIMUS* 411 (2012); Tina Pippin, *Roundtable on Pedagogy: Response: Renounce Grading?*, 82 *J. AM. ACAD. RELIGION* 348 (2014); Lars Owe Dahlgren et al., *Grading Systems, Features of Assessment and Students’ Approaches to Learning*, 14 *TEACHING IN HIGHER EDUC.* 185 (2009); Gregory K. Tippin, Kathryn D. Lafreniere & Stewart Page, *Student Perception of Academic Grading: Personality, Academic Orientation, and Effort*, 13 *ACTIVE LEARNING IN HIGHER EDUC.* 51 (2012).

15. See generally Melek Demirel, *Lifelong Learning and Schools in the Twenty-first Century*, 1 *PROCEDIA SOC. & BEHAV. SCI.* 1709 (2009); Joshua L. Jacobs et al., *Encouraging an Environment to Nurture Lifelong Learning: An Asian Experience*, 36 *MED. TCHR* 164 (2014).

16. See Krieger, *supra* note 1, at 122.

17. Jay M. Feinman & Marc Feldman, *Achieving Excellence: Mastery Learning in Legal Education*, 35 *J. LEGAL EDUC.* 528, 547 (1985).

find that students demonstrate a sophisticated ability to self-reflect on the quality of their own learning. This observation contradicts what may be a common assumption in the field of legal education—that extrinsic motivation is the primary driver of student learning.¹⁸ Our findings are perhaps more consistent with scholarship that is critical of conventional grading practices for failing to provide feedback,¹⁹ motivation,²⁰ substantive learning,²¹ and a sense of fairness.²² Together, our data paints a relatively positive, albeit nuanced, story of the experiment with Pass/Fail grading.

In Part I, we discuss the methods of our survey design, including how we measured student well-being and learning, and the limitations of our methods.²³ Parts II and III present our main findings.²⁴ In Part IV, we provide interpretations of these findings for understanding the relationships among student well-being, effort, and learning.²⁵ Part V concludes with recommended directions for reforms and experimentation.²⁶

I. STUDY DESIGN

In early April 2020, we developed a survey to study the possible effects of the shift to Pass/Fail grading. Drawing on the literature on legal education, we asked students how the new grading system would impact their learning,²⁷

18. See Steve H. Nickles, *Examining and Grading in American Law Schools*, 30 ARK. L. REV. 411, 418 (1977) (citing Brereton, *Theories of Examinations* in THE WORLD YEARBOOK OF EDUC. 34 (J. Lauwerys & D. Scanlon eds. 1969)); *id.* at 472, 430-31 n.54, n.59 (observing that faculty and students tend to view grades in law school as a strong motivating force for student effort). The positive impact on motivation by grades is explored in areas outside of law as well. See generally ALBERT OOSTERHOF, CLASSROOM APPLICATION OF EDUCATIONAL MEASUREMENT (2001) (grades used as a motivational tool as well as to develop good study habits and desirable classroom management behaviors); James H. McMillan, *Secondary Teachers' Classroom Assessment and Grading Practices*, 29 EDUC. MEASUREMENT: ISSUES & PRAC. 20, 29 (2001) (noting that grading practices were designed to “encourage student engagement, motivation, and understanding”).

19. Douglas A. Henderson, *Uncivil Procedure: Ranking Law Students Among Their Peers*, 27 U. MICH. J. L. REFORM 399, 403-04 (1994).

20. Barbara Glesner Fines, *Competition and the Curve*, 65 UMKC L. REV. 879, 901 (1997); Nickles, *supra* note 18, at 477-78; Stephen Berger, *Evaluation and Grading Systems in Law Schools: Some Proposals – Part I – Evaluation of the Student*, 17 Student LAW J. 32 (1972) (“Grades may . . . hasten a student’s loss of interest in law school”).

21. Nickles, *supra* note 18, at 463; ROY STUCKEY ET AL., BEST PRACTICES FOR LEGAL EDUCATION 176-78 (2007).

22. SULLIVAN ET AL., *supra* note 6, at 165 (observing that grading is perceived by many students as “unfair, counterproductive, demoralizing, and arbitrary”).

23. See *infra* Part I.

24. See *infra* Parts II-III.

25. See *infra* Part IV.

26. See *infra* Part V.

27. The learning objectives we examined include the extent to which the change in grading system would harm or help their ability to understand substantive and procedural law, cultivate professional ethics and professionalism, stimulate self-reflection, and develop skills of critical thinking, oral and written communication, legal practice, problem-solving, and legal analysis and reasoning. See also Steven C.

their levels of anxiety and well-being, and the effort they would put into their courses.²⁸ We asked faculty members to anticipate how students would be affected on these measures and how they thought the system would impact student performance in their courses. The surveys employed closed answers using Likert scales and a range of open-ended questions.²⁹

We surveyed both faculty and students at two different time intervals: April 2020, when the systems had just been implemented (Time 1) and June 2020, after exams were completed (Time 2). We reached out to deans at all US law schools and personal contacts among faculty at 40 US law schools. In Canada, we contacted faculty and student leadership representatives at most Canadian law schools, in both English and French.

We were fortunate to have reached students and faculty at a moment when they were already quite engaged with the issue—indeed, some law students’ representatives declined to forward our survey because of the high degree of controversy the grading changes had already elicited. Yet this strong engagement appears to have varied effects: while it may have discouraged some from completing the survey, for many others, the survey presented an opportunity to express their strongly held views. The open-ended questions were for the most part answered comprehensively, attesting to the level of engagement with the issue, before a prohibitive degree of COVID-related “survey fatigue” may have taken effect.

At Time 1, we received 1,207 completed surveys from students and 373 completed faculty surveys. At Time 2, 335 students and 81 faculty completed the survey. We provided participants with a way of anonymously connecting their first and second surveys; a total of 112 students and 17 faculty completed this matching option, providing us with an opportunity make direct comparisons of identical populations at both times. Faculty respondents came from 70 US and 18 Canadian law schools, and student respondents from 16 US and 14 Canadian law schools—although approximately 80 percent of all student responses came from four US and eleven Canadian law schools. We collected data on students self-identified race, ethnicity, gender, year of study, and economic background.

Bahls, *Adoption of Student Learning Outcomes: Lessons for Systemic Change in Legal Education*, 67 J. LEGAL EDUC. 376 (2018).

28. Additional questions included: whether the new grading system enabled them to be more creative and cooperative; to feel less demoralized about exams and other assessments; to experience more joy in the learning process; and whether the new system was more fair. Where the new grading system was optional, we asked what system students chose, and why, and if they would have preferred to have a mandatory system imposed. We asked students for whom the system was mandatory whether they wished they had been given a choice, and why.

29. See Dr. Saul McLeod, *Likert Scale Definition, Examples and Analysis*, SIMPLYPSYCHOLOGY (2008), <https://www.simplypsychology.org/likert-scale.html> (last updated Aug. 03, 2019) (providing an overview of Likert Scales).

Unless otherwise stated, the statistical analysis we report in this paper relies on the comparison of means using Welch’s two sample t-test, and reports significance at a level of $p < 0.05$. We have developed numerous scales to aggregate measures: a Well-Being Scale, an Effort Scale, and three separate learning scales—one for “legal skills”, one for “extralegal skills,” and one for non-skills-based “learning virtues.”³⁰

II. FINDINGS REGARDING HYPOTHESIS 1: WELL-BEING IS ENHANCED BY PASS/FAIL GRADING

A. *Students: High Anxiety Alleviation Overall*

Our first hypothesis was that Pass/Fail grading would significantly alleviate student anxiety. This idea is reflected in faculty commentaries at Time 1, where student anxiety was the second most common theme, according to our qualitative coding, on the question of why Pass/Fail grading was implemented.³¹ The most frequent qualitative theme on this question was equity and fairness to students, but even within this category faculty expressed a great deal of concern for student well-being. These responses emphasized the “very uneven way the pandemic has affected people” such that some students had “more free time than ever” while other students faced overwhelming caretaking obligations as well as health and well-being challenges. Many other faculty responses focused exclusively on student well-being and, for example, “relieving anxiety and pressure on students.”

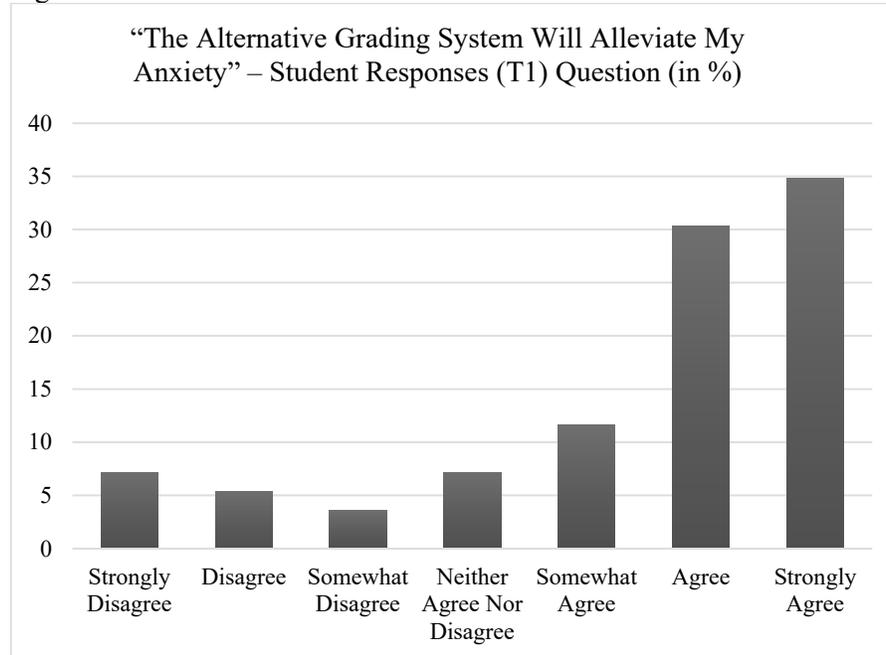
Also consistent with our first hypothesis, students overwhelmingly reported that the alternative grading system would (Time 1) and did (Time 2) alleviate their anxiety. At Time 1, not only was “strongly agree” the most frequently selected response to the question of whether the alternative grading system would alleviate anxiety (selected 34.82% of the time), but the overall mean of answers to the question was quite high at 5.23 (with (1) representing “strongly disagree” and (7) representing “strongly agree”). At Time 2, the mean was even slightly higher at 5.41.³²

30. See *infra* Parts II.B, III.A, III.B.

31. According to our qualitative coding, the top responses were equity and fairness to students impacted by the pandemic (162 responses), student anxiety and well-being (52 responses), fairness to faculty (22 responses), student job prospects (21 responses), and integrity of the grading system (20 responses). We coded 15 other categories that each contained fewer than 20 responses.

32. See *infra* Figure 1. The increase in these means is not statistically significant.

Figure 1.



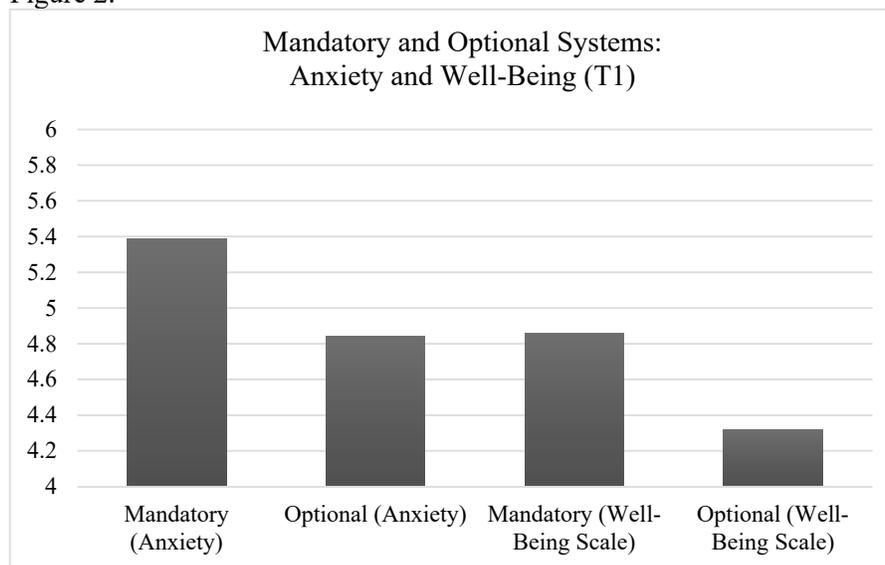
This finding is reinforced by responses to open-ended survey questions. Many students emphasized that Pass/Fail grading enabled them to balance their lives and focus more on mental health, including, but not limited to, issues arising in the pandemic context. As one student summarized: “Without the unnecessary burden of grade competition, I have been able to spend more time taking care of my mental health.” A major theme of these responses was that Pass/Fail grading enabled students to meet family obligations, particularly among students who are parents with, as one student expressed, “exhausting responsibilities at home to support . . . family mentally and financially.” More generally, some students noted that Pass/Fail grading provided them an opportunity to better balance their studies and other commitments, as one student remarked: “Taking the anxiety away from having to do better than my peers has helped me be more engaged with the material and also live a more balanced life.”

B. Greater Anxiety Alleviation Under Mandatory Pass/Fail Systems

The notion that moving away from hierarchical grading was associated with improved student well-being is also supported by our analysis of differences among the alternative grading systems. As between students for

whom the alternative grading system was imposed mandatorily and those who retained the option to select hierarchical grades, students under a mandatory system reported a higher mean (5.39) on anxiety alleviation than students in an optional system (4.84).³³ A similar relationship is found when comparing the two systems using our more holistic well-being scale.³⁴

Figure 2.



To interpret this finding, we look again to the open-ended responses in which students explained that the optional system retained the hierarchical nature of curved grading. Because employers may view a “Pass” under an optional system as a sign of poor academic performance, students described feeling pressure to select the option of a normal grade (e.g., on the A through F or 0 through 4 grading scales). Thus, the finding that mandatory Pass/Fail

33. This difference is significant at $p < 0.001$.

34. See *infra* Figure 2. The differences in the means according to whether a student had an optional or mandatory system were all found to be statistically significant using Welch’s Two Sample t-test:

Students (T1)	Mandatory System		Optional System	
	Mean	N-size	Mean	N-size
More Joy	4.09	851	3.74	338
Less Demoralized	5.09	850	4.39	338
Alleviate Anxiety	5.39	849	4.84	338
Well-Being Scale	4.86	849	4.32	338

(1) Strongly Disagree – (4) Neither Agree nor Disagree – (7) Strongly Agree

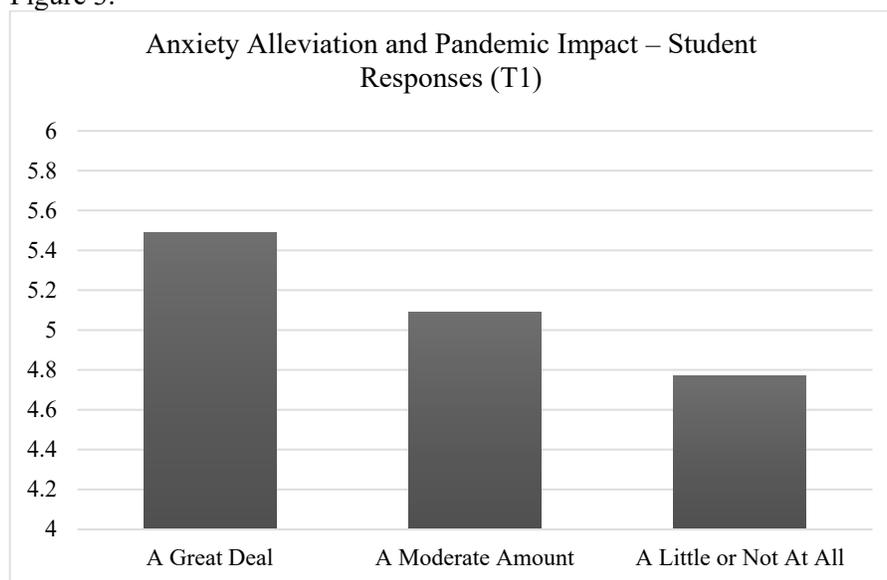
A linear model also shows statistical significance for the grading system, to the effect that the coefficient for the optional system is significantly lower than that of either a Pass/Fail or a Pass/Fail/Honors system ($p < 0.001$).

systems were associated with greater alleviation of anxiety is consistent with our overall conclusion that moving away from hierarchical grades appears to reduce student anxiety.

C. Anxiety and Pandemic Impact

Unsurprisingly, anxiety alleviation bore a significant relationship to students' experiences of the pandemic. Among students at Time 1, we find a correlation between reported anxiety alleviation and pandemic impact: students who reported that the pandemic impacted them “a great deal” also reported a higher mean of anxiety alleviation (5.49) than students who reported a “moderate” impact (5.09) or “little or no” impact (4.77).³⁵

Figure 3.



Many of our open-ended responses gave poignant details about experiences in the early pandemic. One such respondent explained that Pass/Fail “alleviated a large amount of stress in one of the most stressful times in living memory.” Another respondent offered the following perspective:

My partner is a front line health care worker, and most of my family [members] are older, have co-morbidities, have been laid off, or live extremely far away. The last thing I want to think about is the

35. See *infra* Figure 3.

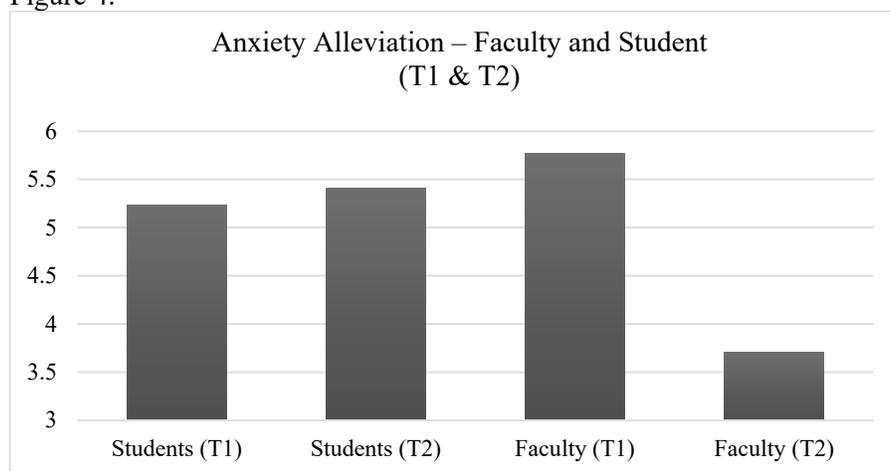
crushing anxiety of how employers will perceive my 1L grades - grades that don't show the whole picture

In sum, students who reported less impact from the pandemic still tended to describe substantial alleviation of anxiety, but the greatest effect on anxiety was found among students who self-reported the worst experiences of the pandemic.

D. Faculty Perceptions of Student Anxiety Alleviation: High at Time 1, Low at Time 2

At Time 1, faculty anticipated that students would experience a high degree of anxiety alleviation from shifting to Pass/Fail Grading (mean = 5.77), even to a slightly greater degree than found in the student responses. However, curiously, at Time 2 faculty reported a much lower mean (3.71) on the same question.³⁶

Figure 4.



This finding is difficult to interpret because of the relatively small size of the faculty Time 2 sample (N = 81) and the lack of open-ended responses provided on this point by faculty at Time 2. If it is the case that faculty generally perceived a lesser degree of anxiety of alleviation at Time 2, this could reflect faculty recognition that the impacts of the pandemic had grown worse (since Time 1), and, thus, they came to believe that Pass/Fail grading

36. See *infra* Figure 4.

would not be enough to alleviate student anxiety given the multiple well-being challenges that students faced in the continuing pandemic context.

Moreover, faculty skepticism about anxiety alleviation at Time 2 could be consistent with the “buyer’s remorse” narrative of our findings—wherein faculty generally offered positive impressions of the Pass/Fail grading system, regarding student learning and exam performance, but nevertheless were opposed to continuing Pass/Fail grading after the Spring 2020 semester.³⁷ These are only speculations about a relatively low-confidence quantitative finding. However, an important point of clarification is that we do not believe that this Time 2 faculty finding undermines our overall response to Hypothesis 1 (that Pass/Fail grading reduces student anxiety), in part because students are a better authority to report on their own well-being and anxiety. Our student data show strong anxiety alleviation at both Time 1 and Time 2.

III. FINDINGS REGARDING HYPOTHESIS 2: LEARNING DOES *NOT* APPEAR COMPROMISED BY PASS/FAIL GRADING

Our second hypothesis is that removing grades would remove a key incentive for students to exert effort, and with reduced effort, less learning would result. This hypothesis suggests that Pass/Fail grading presents a trade-off between enhanced well-being and diminished learning. While this hypothesis is supported by intuition, it is not consistent with our data. We find limited evidence of diminished effort and no evidence of substantially diminished learning (for students on average). In some respects, we even find self-reported accounts of learning improvements under Pass/Fail.

A. Effort

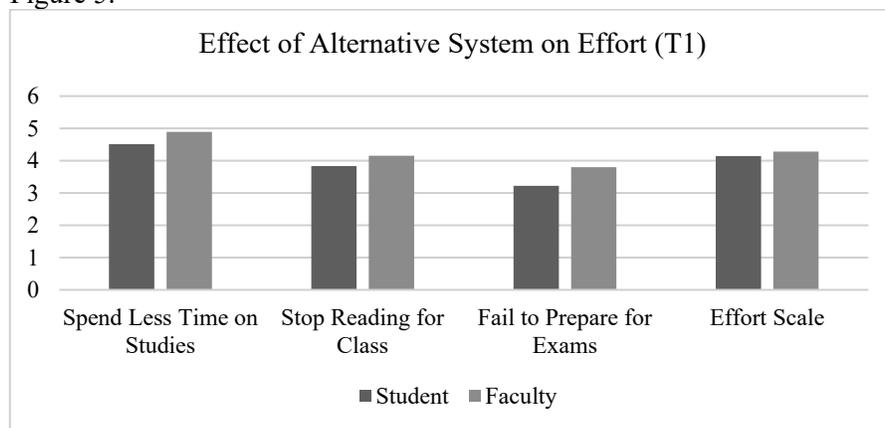
Some of our measures suggest that the shift to Pass/Fail is weakly correlated with a reduction in effort. In the open-ended responses, some faculty worried that Pass/Fail grading would tend to deteriorate student effort. As one faculty participant explained: “I was very concerned that if we went to pass/fail, students would not study for their courses and thus would not master material needed to pass the bar.” Some faculty observed this reduction in effort in their classes, where, as one participant put it, “the majority of the class gave up once they realized that they’d get a pass regardless [of] what they do.”

37. Approximately 65% of faculty respondents disagreed (somewhat or strongly) that the experiment should be repeated in the subsequent academic year, and over 75% disagreed that it should be repeated in the future.

Some students seemed to agree with this narrative of reduced effort, noting that, without the “threat of the curve hanging over [their] head[s],” they lacked “accountability” and “motivation to give . . . [their] best shot[s].” Instead, some students felt that they had been incentivized to “learn the bare minimum just to pass.” Another student explained that Pass/Fail grading removed the ability to take “pride” in their academic achievements. Nevertheless, other students reported that their efforts were bolstered by a sense of intrinsic motivation, a theme discussed below.³⁸

Notwithstanding these qualitative comments, our statistical findings reveal that the reduction of effort is somewhat qualified. The effect is weak and uneven, and it disappears over time. We asked both students and faculty the extent to which they disagreed with the statements that the new system would cause them to (a) spend less time on studies, (b) stop reading for class, and (c) fail to prepare for exams. These three measures are grouped into an Effort Scale. On this measure, a (4) represents “neither agree nor disagree,” (1) represents “strongly agree,” and (7) represents “strongly disagree.” Therefore, the *higher* the value, the *more effort* is reported. A value below 4 would be consistent with the hypothesis that the shift to Pass/Fail would reduce effort; a value above 4 would be inconsistent with the hypothesis. At Time 1, students reported a value below 4 in two of the three measures; faculty reported a value below 4 in only one of the measures. For both faculty and students, the score on the aggregate Effort Scale was *above* 4.³⁹ Together, this indicates only limited support for the notion that the shift to an alternative grading system negatively affected effort.

Figure 5.



38. See *infra* Part IV.

39. See *infra* Figure 5.

The notion that less hierarchical grading systems would tend to reduce student effort finds some moderate support in our comparison of students who were in a pure Pass/Fail system against those who were in a Pass/Fail/Honors system; the latter system, by including an “Honors” designation, maintains some degree of hierarchical grading. At Time 1, with borderline significance ($p = 0.06$) between the differences, students in a pure Pass/Fail system reported a mean of 3.77, whereas students in a Pass/Fail/Honors system reported a mean of 4.04. This represents a reporting of *greater effort* by those in a Pass/Fail/Honors system, which is consistent with the hypothesis that removing grades results in lower levels of student effort.

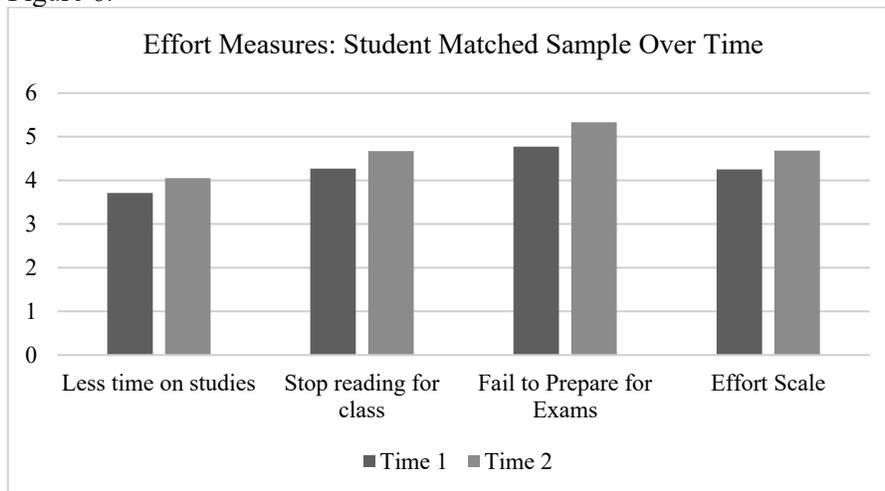
These somewhat qualified effects on effort at Time 1, however, disappear as time goes on.⁴⁰ Given that the responses at Time 2 ask students to report on how the change in grading system *did* affect their effort (as opposed to at Time 1 how the change *would* affect their effort), this Time 2 measure is arguably more revealing, and the result is that the effort effect disappears.

At Time 2, the reported measures of effort across all students increase to an Effort Scale rating of 4.57. This increase, from 4.14 at Time 1, to 4.57 at Time 2, is statistically significant, although it is worth noting that some caution must be exercised when comparing the means of two different population sets (the sample at Time 1 versus the sample who responded to the follow-up survey request at Time 2). However, in our matched sample of 112 respondents, self-reported effort measures also increase from Time 1 to Time 2 with statistical significance.⁴¹ Together, these findings suggest that while there was an initial perception (albeit weak) that the shift to gradeless learning would result in a reduction of effort, this trend disappears as time passes.

40. The statistical significance of any difference between the two systems disappears at Time 2.

41. See *infra* Figure 6. The comparison of each individual value, as well as the Effort scale, is significant at $p < 0.05$ ($N = 112$)

Figure 6.



B. Learning

Hypothesis 2 posited that the move to gradeless learning would diminish effort and *thereby* reduce learning. As discussed above, the first part of the hypothesis can only be partially confirmed (and in a qualified way). Here we consider the second part: the reduction in learning.

To measure whether learning has been affected by the change in grading system, we rely on a series of self-reported measures. We asked students to describe the extent to which they thought the new grading system would help or harm their learning with respect to a number of learning objectives.⁴² A score of (1) represents “greatly harm,” (3) represents “no impact,” and (5) represents “greatly help.”⁴³ Using these measures, we make the following observations, all of which suggest that our hypothesis – that learning was diminished – is not confirmed.

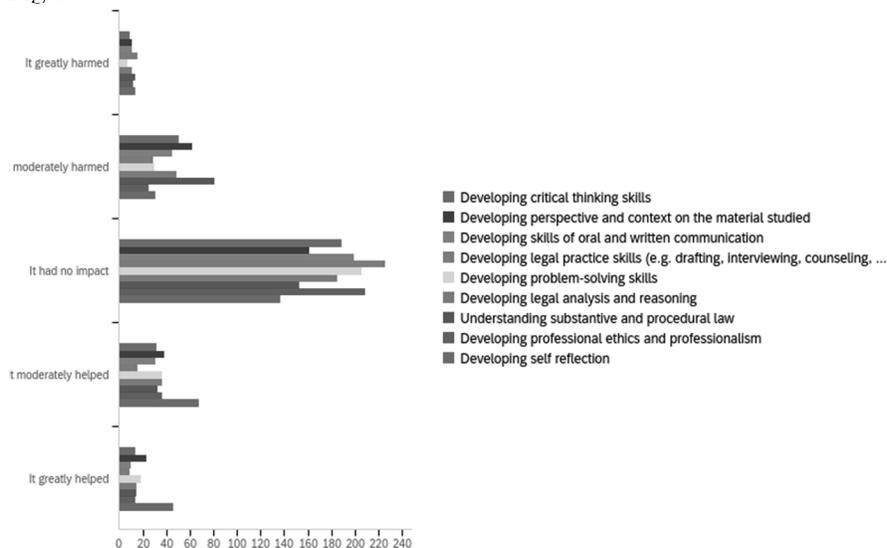
First, we observe that learning across the board is more or less unaffected. At Time 1, the mean of responses to all learning questions clustered just below a score of (3), ranging from 2.57 (understanding substantive and

42. These include critical thinking skills, perspective and context, skills of oral and written communication, legal practice skills, problem-solving skills, legal analysis and reasoning, understanding substantive and procedural law, professional ethics and professionalism, and self-reflection.

43. See *infra* note 44.

procedural law) to 3.14 (developing self-reflection).⁴⁴ Moreover, the responses to these questions resemble a normal distribution.⁴⁵ This suggests that, anticipatorily, students' self-conceptions are not consistent with the hypothesis that the change in grading system would impact their learning.

Figure 7.



Second, students' self-reporting of the extent to which the change in grading system affected their learning shows a *positive improvement over time*. The range of their responses to the learning objectives is between 2.84 (understanding substantive and procedural law) and 3.34 (developing self-reflection).⁴⁶ The increase from Time 1 to Time 2 is statistically significant

44.

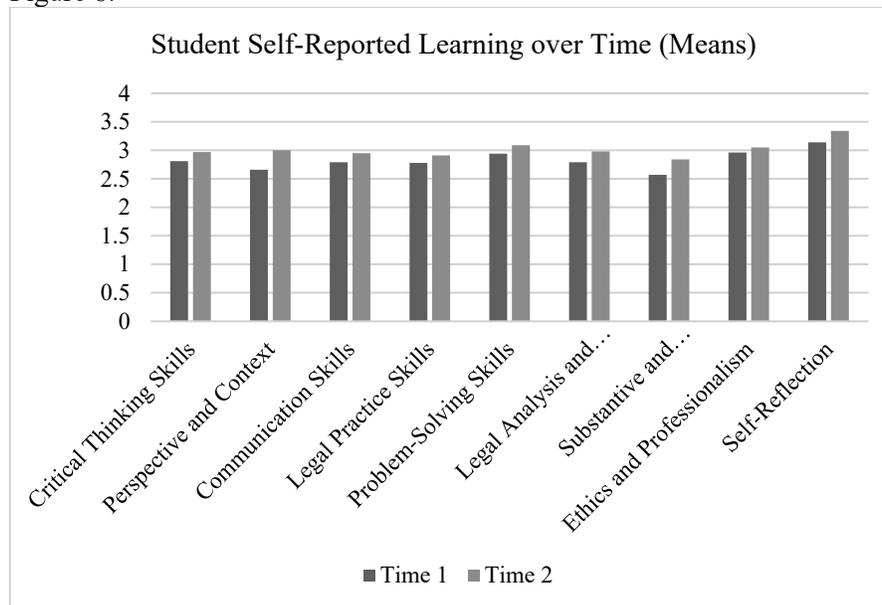
Learning Objectives - Students	Time 1 – N	Time 1 – mean
Developing Critical Thinking Skills	1188	2.81
Developing Perspective and Context	1182	2.66
Oral and Written Communication Skills	1187	2.79
Legal Practice Skills	1187	2.78
Problem-Solving Skills	1187	2.94
Legal Analysis and Reasoning	1184	2.79
Understanding Substantive and Procedural Law	1188	2.57
Professional Ethics and Professionalism	1186	2.96
Developing Self-Reflection	1186	3.14
Learning Scale	1175	2.83

(1) Greatly Harm – (2) Moderately Harm – (3) No Impact – (4) Moderately Help – (5) Greatly Help

45. See *infra* Figure 7.

(with the caveat that these are different groups of respondents) for all but one of the measures.⁴⁷ Together, these Time 1 and Time 2 responses suggest that the impact on learning hovers around “no impact” and that retrospective attitudes paint the learning in a consistently more positive light.

Figure 8.



46.

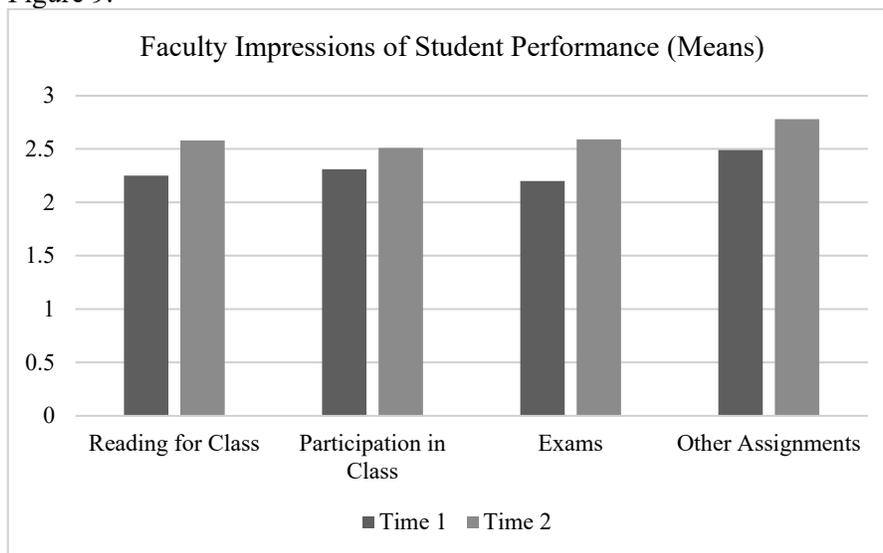
Learning Objectives - Students	Time 2 - N	Time 2 - Mean
Developing Critical Thinking Skills	295	2.97
Developing Perspective and Context	295	3.00
Oral and Written Communication Skills	296	2.95
Legal Practice Skills	296	2.91
Problem-Solving Skills	297	3.09
Legal Analysis and Reasoning	296	2.98
Understanding Substantive and Procedural Law	296	2.84
Professional Ethics and Professionalism	296	3.05
Developing Self-Reflection	296	3.34
Learning Scale	294	3.02

(1) Greatly Harm – (2) Moderately Harm – (3) No Impact – (4) Moderately Help – (5) Greatly Help

47. See *infra* Figure 8. The p value comparing the means from Time 1 to Time 2 is less than 0.05, except for “Professional Ethics and Professionalism”, which yields a marginally significant result at $p = 0.06$. For the caveat to be applied in comparing our T1 and T2 samples, see Austin, *infra* note 54. The differences in means from T1 to T2 are statistically significant when controlling for Gender, Race, and Economic Disadvantage.

We also asked faculty members how they thought the change in grading system would affect student performance, both related to class (preparatory reading and participation) and assessments (exams and other assignments). The faculty-reported measures were lower than student measures (ranging from 2.20 to 2.49 at Time 1), but again, at Time 2, the means of the responses increased in a statistically significant manner, to over 2.5 out of 5.⁴⁸ Faculty reported student performance on exams and other assignments just moderately below a 3.0 rating of “about the same as normal.” To the extent that faculty perceptions on this issue reflect their impressions of student learning, this measure seems to reinforce our finding from students that no seriously negative impacts of learning were occasioned by the move to gradeless learning.

Figure 9.



We were also able to group together certain measures to disaggregate learning scales by themes. We wanted to measure whether so-called “substantive” learning was self-assessed differently than more holistic or intrinsic measures of learning (and, within substantive learning, whether law-related learning was assessed differently than non-law related learning). To do so, we created a “legal skills” learning scale, which grouped together the student answers to whether the new grading system impacted their ability to

48. See *infra* Figure 9 ((1) represents “far worse than normal” and (5) represents “far better than normal”).

learn legal practice skills, legal analysis and reasoning, and understanding substantive and procedural law. We created an “extra-legal skills” scale that included measures on critical thinking, perspective-taking, communication skills, and problem-solving. Finally, we created a “learning virtues” scale, which grouped together creativity, cooperation, and joy.⁴⁹

Consistent with the disconfirmation of our second hypothesis, when we compare students under a Pass/Fail system against those with a Pass/Fail/Honors system,⁵⁰ there is *no* statistically significant difference between the two groups for either the legal skills scale or the extra-legal skills scale at either Time 1 or Time 2. In fact, while not statistically significant, scores for the Pass/Fail/Honors system are actually *lower than* the scores for Pass/Fail at both Time 1 and Time 2.⁵¹ Had our hypothesis been confirmed, we might have expected these “substantive” learning objectives to be *higher* under the Pass/Fail/Honors system, given that under that system there is a hypothesized greater incentive to put in effort. The fact that we do not observe this, and ostensibly observe the opposite, supports rejecting our second hypothesis.

Finally, further disconfirming our hypothesis, we see a *statistically significant* difference at Time 2 between Pass/Fail and Pass/Fail/Honors systems with our learning virtues scale – which, as we have stated, contains measures of creativity, cooperation, and joy in learning. The effect associated with the Pass/Fail/Honors system is a *decrease* of 0.3 standard deviations in the learning virtues scale.⁵² Thus, although we do not see a significant difference in substantive skills (legal and non-legal) when comparing purely gradeless systems with systems that include an “honors” designation, we do see that the purely gradeless option appears to have better results regarding more holistic virtues of learning.

This statistical finding is bolstered by our qualitative results. In response to open-ended questions, students frequently described learning benefits associated with Pass/Fail grading, with an emphasis on the “real”, “true”, and “deep” learning that was made possible by removing the usual grading system. As one student commented: “[Pass/Fail] alleviates a lot of stress, and

49. See *supra* notes 44, 46.

50. This comparison we take to be the most robust comparison to test the presence of hierarchy against no hierarchy, without the confusion of whether a system was optional or not. This comparison between the two systems is made among those who mandatorily had a system imposed.

51. The scores are (not statistically significantly) higher at both Time 1 with the extra-legal scale. For the legal scale, scores are lower for Pass/Fail/Honors at Time 1, but not Time 2. Because the numbers are not significant, we do not report them here.

52. This measure is obtained by a forward model test. The difference in co-efficient is 0.49 on the five-point scale, with a p value of 0.05. A Welch’s t-test produces a borderline significant (p = 0.066) result, with a mean of 4.37 for the Pass/Fail system and a mean of 3.88 for the Pass/Fail/Honors system.

I actually feel like I'm learning for learning's sake. So much of law school is about grades that it never feels like you are learning anything at all."

Students elaborated on this point in several ways. They suggested that Pass/Fail encouraged them to take an approach to learning that was less focused on exams or grades, reducing their "worry about competing to get the best grade in the class" and permitting them "to focus on learning-based goals rather than competitive test-based goals." Under Pass/Fail, students emphasized that they could "stud[y] the subject matter more thoroughly" rather than "[studying] merely for the purpose of succeeding in an exam setting." Pass/Fail offered students time to "savour readings, take [their] time, think deeply and creatively about what [they are] learning, and enjoy the process." Some students mentioned that the freedoms of Pass/Fail enabled them to individualize their studying, and find an approach, as one student explained, "better suited to [their] own learning process." The usual grade-oriented approach was described by some students as encouraging a focus on "just memorizing" the material, whereas Pass/Fail enabled "mental space to actually learn the material."

Many students emphasized a newly reflective quality to their learning. As one student observed, by removing the "usual anxiety and pressure of exams," Pass/Fail allows students to "go deeper in learning the material and seeking for greater contextual understanding." Another student explained that when their law school switched to Pass/Fail they suddenly felt that they could step back and "look at the year's content as a whole and reflect [on their] learning" rather than merely focusing on "how to get a good grade." Together with our statistical findings, these qualitative observations suggest that the hypothesis that gradeless learning would detract from learning is not confirmed; if anything, our data points to the opposite: the learning enhancements associated with removing grades.

IV. INTERPRETATIONS

Our findings have limited generalizability, largely owed to sampling limitations and the confounding influences of the pandemic context. Moreover, grades serve a variety of functions, including sorting students for job opportunities, which we do not explore in this paper. Our focus here is limited to how grading affects student well-being and learning, and how student effort is intertwined with these factors. With these limitations in mind, we sketch out a narrative to be explored in further research: that Pass/Fail grading tends to alleviate student anxiety (confirming Hypothesis 1) while not diminishing student learning despite a slight reduction in student effort (disconfirming Hypothesis 2). These preliminary findings present a

puzzle: How could it be that removing the incentive structure of conventional grading systems does not appear to diminish learning?

One answer may be that, by alleviating student anxiety, Pass/Fail enhances learning. We observe statistically that competitive grading systems tend to suppress the learning virtues of creativity, cooperation, and joy. Students correspondingly emphasize, in their open-ended responses, that Pass/Fail systems can enhance intrinsic motivation and promote deeper learning. These findings are consistent with prior literature, which has suggested that hierarchical grading systems tend to define student achievement by exam performance, rather than domain knowledge and skill mastery.⁵³ Such grading systems may also reduce students' intrinsic motivation and discourage "growth mindset" and a sense of taking responsibility for their own learning.⁵⁴ Moreover, some research suggests that hierarchical grading encourages students to take safer and less creative approaches to their studies.⁵⁵ In the terms of the 2007 Carnegie Report, these narrowing effects may tend to undermine efforts to instill professional identity, self-reflection, and ethics.⁵⁶

A more alarming answer to this puzzle would be that hierarchical grading puts law students in a state of chronic anxiety, which is bad for their health, particularly their brain health, and thus not conducive to learning. A growing body of empirical research suggests that lawyers and law students often spend months and years in an exhausting pattern of fight-or-flight stress—an elevated experience of anxiety that is "either repeatedly turned on or cannot be turned off."⁵⁷ This causes a number of health problems,⁵⁸ and it may tend to diminish cognitive capacity, leading to impaired concentration, memory, problem-solving, and language processing.⁵⁹

Even if anxiety is not necessarily supportive of learning, as is suggested through the lens of this study, there remains the question of how effort might

53. See generally Feinman & Feldman, *supra* note 17.

54. Debra S. Austin, *Positive Legal Education: Flourishing Law Students and Thriving Law Schools*, 77 MD. L. REV. 649, 676 (2018) (noting that growth mindset encourages identifying goals, making plans, and overcoming obstacles).

55. *Id.* at 686. See generally Olympia Duhart, *It's Not for a Grade: The Rewards and Risks of Low-Risk Assessment in the High-Stakes Law School Classroom*, 7 ELON L. REV. 491 (2015) (recommending formative assessment to limit negative effects of grading and encourage creativity).

56. SULLIVAN ET AL., *supra* note 6, at 176-77.

57. Debra S. Austin, *Killing Them Softly: Neuroscience Reveals How Brain Cells Die from Law School Stress and How Neural Self-Hacking Can Optimize Cognitive Performance*, 59 LOY. L. REV. 791, 821 (2013).

58. *Id.* at 820 (reviewing research showing that chronic stress causes "surges in blood pressure and scarring in the blood vessels, which increases the risk of stroke and heart attack" and "impairs the white blood cells necessary to fight infection and eventually cripples the immune system").

59. *Id.* at 825 (noting that hippocampi shrink in people who experience stress, low self-esteem, major depression, and post-traumatic stress disorder (PTSD), which has a number of negative effects on health including impaired motivation, creativity, and curiosity).

support learning. One surprising finding of our study is that diminished effort does not seem to correlate with diminished learning: while Pass/Fail grading is in our study weakly associated with lower effort (and some open-ended responses described a quite substantial reduction in effort), our learning measures do not appear to decline under Pass/Fail. One explanation for this finding may be that the conventional premise—that greater effort necessarily leads to better learning—is not entirely accurate.

Somewhat counterintuitively, it may be the case that some reduction in law students' general levels of effort actually *enhances* their learning. In other words, there may come a point at which the benefits of greater effort (e.g., trying to absorb more information, re-reading case materials, writing more extensive outlines) come at the cost of other factors that facilitate learning (e.g., participating in activities that support mental and physical well-being, taking time to reflect on readings, and meeting with peers to informally discuss legal concepts). It is possible that under a Pass/Fail system, students may expend a bit less effort, spending fewer hours on their studies each week, but in the process work “smarter” not “harder.” Although this is speculative, such a possibility would be consistent with empirical studies across a range of contexts that suggest that people are generally only capable of roughly four to five hours of “deep work” per day and perform better at cognitively demanding tasks when limited to roughly this duration.⁶⁰

V. CONCLUSION

One of the core goals of legal education is to help students learn. A conventional assumption is that hierarchical grading, as a motivator for student effort, is a key factor that promotes learning.⁶¹ This assumption should be rigorously assessed rather than taken for granted. Our findings, in the unique Spring 2020 context of Pass/Fail grading in North American J.D. programs, only weakly support the notion that grades incentivize effort. And, to the extent that grades do somewhat incentivize effort, our findings do not support the conclusion that extra effort is necessarily supportive of learning. Moreover, we find that grades may negatively impact student anxiety to an extent that is detrimental to learning. In sum, our analysis provides little support for the notion that hierarchical grades support learning in legal education.⁶²

60. See K. A. Ericsson & A. C. Lehmann, *Expert and Exceptional Performance: Evidence of Maximal Adaptation to Task Constraints*, 47 ANN. REV. PSYCHOL. 273, 279 (1996) (based on a study of elite performers in different fields, finding that “their maximal amount of fully concentrated training that they could sustain every day for years without leading to exhaustion and burn-out was around four hours a day”).

61. Nickles, *supra* note 18, at 430-31 n.54, n.59.

62. See *supra* Part III.

In thinking through the implications of these findings, students' reflections on learning are especially insightful. Indeed, we find that students, relative to faculty, offered far more numerous and elaborate commentaries on the quality of learning in law school. This observation contradicts the image of law students as cynical, extrinsically motivated learners. Instead, the students in this study expressed a great appetite for a more meaningful learning experience, driven by their own curiosity and a desire to understand the interconnections among assigned materials.⁶³ Given the depth of insight expressed by students in this study, we recommend that law faculty and administrators consider giving students more voice in deliberations over policies that affect learning.

Such policy reforms could include reducing student workload to a level that might better support their education, both with respect to substantive learning and less tangible learning virtues. Another promising direction may be continuing Pass/Fail/Honors and optional Pass/Fail grading. These approaches may mitigate student anxiety (relating to the possibility of receiving lower grades) while still allowing some students to be recognized for high academic achievement.⁶⁴ While faculty respondents overwhelmingly rejected this recommendation when asked whether they would support continuing alternative grading systems, our findings suggest that conventional law school grading could be improved if law schools are willing to innovate and experiment with different approaches.⁶⁵

Law schools should also consider continuing the novel measures that were adopted in the early COVID-19 pandemic to provide holistic support to students in their lives outside of the classroom. This included new mental health resources, financial assistance through "hardship funds" and reducing fees, special employment options in clinics, research assistantships, and micro-internship programs, and easing policies for leaves of absence, scholarship cutoffs, and dismissal.⁶⁶ Even before the pandemic, some law schools had provided students free or low-cost food, affordable housing, assistance with childcare access and expenses, need-based financial aid, and

63. See *supra* Part IV.

64. See Sandomierski, Bliss & Collesso, *supra* note 9 (explaining the important benefits to some students of having the opportunity to distinguish themselves through "merit," as described by students from historically underrepresented backgrounds in particular).

65. See *supra* note 37. Although our faculty respondents generally perceived their alternative grading schemes positively, when we asked them at Time 2 whether the "alternative grading policy adopted by my law school in Spring 2020 should be adopted as a standing policy into the future (even after the pandemic has passed)," the answer was overwhelmingly "No."

66. A number of law schools increased the provision of financial aid and scholarships for those in need, via a "safety net fund," "hardship fund," or "law student wellness fund." Some law schools publicized existing mental health resources, offered new avenues for community building, and facilitated connections with alumni.

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on-site mental health supports. Expanding such efforts might tend to decrease student anxiety, which, as the findings in this article have suggested, might enhance their learning.⁶⁷ Any of these suggested reforms could be pursued on a trial basis while gathering data about impacts on learning and well-being, as well as job prospects, inclusiveness, bar passage, and other important outcomes. Experimentation, paired with empirical assessment of what works, in our opinion, can help law schools in their efforts to produce healthy and effective lawyers. This study has aimed to take one step in this direction.

67. *See supra* Parts II-III.