

Measuring Law Student Success from Admissions Through Bar Passage: More Data the Bench, Bar and Academy Need to Know*

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EXECUTIVE SUMMARY

Law schools seek to admit students based on “merit” yet most fail to do a robust, complex consideration of merit in the admission process. Instead, the default position is that “merit” consists of Law School Admissions Test [LSAT] scores and undergraduate grades, with LSAT numerical scores often playing an outsized role in “merit” admissions and financial award decisions. One justification for the heavy reliance on LSAT scores is the belief that high LSAT scores identify the good students - i.e. those most likely to achieve high law school grades. This study finds that, at some schools, data may not support that belief and it adds to the growing body of literature suggesting there are multiple reasons that law schools, and *U.S. News*, should re-examine the heavy emphasis placed on LSAT numerical scores as suggested by the Law School Admissions Council.¹

We used institutional data from a total of 2,440 students who matriculated between Fall 2009 and Fall 2015 from Georgia State University College of Law [GSU] (N=1,492) and City University of New York Law School [CUNY] (N=948) to examine relationships between: 1. LSAT scores, Undergraduate Grade Point Averages [UGPA], and the combination of LSAT and UGPA, and student performance in doctrinal courses and experiential courses, overall first year grades and final law school GPAs; 2. LSAT scores, course performance, and final and first year GPAs and first-time bar passage; and 3. LSAT scores and pro bono work performed in law school (GSU only).

Using a variety of statistical analytical processes, the data indicates that for the two schools studied, LSAT scores as a single predictor have a relatively small predictive value when it comes to first year grades as well as overall law school academic success. In fact, at one of the schools studied, LSAT as a single factor only accounts for 2% of variance in first year law school GPA and 4% of the variance in overall GPA. When used in conjunction with UGPA, as the LSAC suggests, the first-year academic predictive value increases at both schools, but at one school, the combined LSAT and UGPA data points still account for only 10% of variance in the first year academic performance. This study confirms findings from previous studies that the predictive value of LSAT scores (alone and in conjunction with UGPA) varies from school to school and the scores probably predict academic performance less well than would justify the significance placed on them by admissions practices, *US News*, and customary understanding.

Amongst the justifications for heavy reliance on LSAT scores is that the scores predict bar exam passage. This study adds to the growing body of literature finding that while LSAT scores have some predictive value for bar passage, law school grades are much stronger predictors; and that when you look at grades in conjunction with LSAT scores, the scores add little to predicting who will pass the bar exam. Additionally, we found that the combination of the LSAT score, first-year and upper-level doctrinal course performance only accounts for around 30% of variance in bar passage for both schools. Seventy percent of variance in bar passage remains unknown given the data we have for both schools. This data suggests that, to the extent schools seek information about bar passage, they must look beyond LSAT scores and law school doctrinal course grades and engage in longitudinal studies of other potential factors both during law school and the bar study period such as students’ study methods, motivation, self-confidence, financial-/family-/work-related obligations, etc. We have begun a study of those additional issues as part of this grant project, See *A Preliminary Study Looking Beyond LSAT Scores and LGPA: Factors During the Bar Study Period That May Affect Bar Exam Passage*

¹ The Law School Admissions Council [LSAC], the test developer, recommends that schools use the scores in conjunction with undergraduate grade point averages, and that schools use “bands” rather than individual scaled scores, and that schools not rely too heavily on the test in the admissions process. [Cautionary Policies, 2014].

Another area raising questions about schools' and *US News* over-reliance on LSAT scores is the scores' relationship to academic performance in experiential learning courses. In response to public and market pressures to better prepare law students for law practice and new ABA standards, law schools have begun including more experiential learning into their curriculums with the understanding that experiential learning courses are critical training for law practice. In this study, we found LSAT scores to be particularly weak predictors for experiential course success both in the first year and in the upper level curriculum at both schools. The data suggests that, as schools continue to expand experiential course offerings, an exploration by LSAC of how to capture some of the skills measured in experiential learning courses would increase the predictive validity of the LSAT for those courses. Additionally, to the extent one believes that experiential courses are important preparation for (and grades in experiential courses are important measures of) students' ability to practice law, the study's results that LSAT scores relate relatively weakly to experiential course performance may be another reason for caution about placing too much emphasis upon the scores in admissions and scholarship decisions. In this regard, we note that we found that UGPA is an equal, and in some instances a slightly better, predictor of experiential course performance.

We also looked at experiential course performance and first time bar passage and found no relationship between experiential course performance and first-time bar exam passage. If lawyers, judges and state bar examiners believe that experiential courses are critical preparation for law practice, and performance in those classes is some indication of performance as a lawyer and/or readiness for practice, the fact that we found no statistical relationship between experiential course performance and bar passage raises questions about the format and content of the bar exam.

Finally, the LSAT is not designed to predict commitment to pro bono work and our study confirms that at GSU, LSAT scores have no relationship to self-reported pro bono activity during law school. To the extent law schools, the academy, and the profession, truly care about this professional value, our findings identify a need to study whether there are admissions criterion that might predict commitment to pro bono work.

This study's results suggest that not only law schools, but *US News*, should re-examine the weight given to LSAT scores. Schools' median LSAT scores account for 12.5% of schools' total *US News* ranking score. The significant weight given to a single input measure in rankings calculations is hard to justify in light of the variance between schools in the scores' predictive value, the fact that studies show that the scores have much stronger predictive value when combined with UGPA, and the scores' limited predictive value for experiential course performance. We posit that the data from this, and other studies, raises significant questions about the value placed on LSAT scores in the *US News* rankings process – especially if one believes schools should be judged by the lawyers they produce, rather than by their ability to attract good standardized test-takers.

Abstract

Using institutional data from a total of 2,440 students who matriculated between Fall 2009 and Fall 2015 from two law schools, this study examines relationships between: 1. LSAT scores, Undergraduate Grade Point Averages [UGPA], the combination of LSAT and UGPA, and student performance in doctrinal courses and experiential courses, overall first year grades and final law school GPAs; 2. LSAT scores, course performance, final and first year GPAs, and first-time bar passage; and 3. LSAT scores and pro bono work performed in law school. Results indicate LSAT scores predict more weakly for experiential than doctrinal course performance and suggest that, at some schools, data may not support the manner and extent to which many schools rely on LSAT scores as predictors of students' law school academic performance or bar passage. While LSAT scores had some relationship to bar passage at both schools studied, that relationship was minimal once we looked at the scores in conjunction with law school doctrinal course grades. Further, at the schools studied, the combination of LSAT score, first-year and upper-level doctrinal course performance only accounts for about 30% of variance in bar passage for both schools, leaving 70% of variance in bar passage unknown. The study results confirm prior research that schools' reliance on numerical LSAT scores in admissions and scholarship decisions should be examined on a school-by-school basis. The results provide additional evidence questioning the value given to LSAT scores in US News rankings calculations. Finally, the results suggest that to the extent schools seek more information about bar passage, they must look beyond LSAT scores and law school doctrinal course grades and engage in longitudinal studies of other potential factors both during law school and the bar study period such as students' study methods, motivation, self-confidence, financial-/family-/work-related obligations.

Introduction

Law School Admissions Test [LSAT] scores play a significant role in determining who gets into law school and who benefits from law school scholarships and other financial awards (Taylor, 2018). Bar exams determine who obtains a law license and theoretically ensure that law school graduates have the skills necessary to be minimally competent new lawyers (Curcio, Chomsky, & Kaufman, 2014). Critics of the LSAT and bar exams point to the tests' limits in predicting ability and in assessing use of legal reasoning and analytic skills in law practice (Shultz & Zedeck, 2008; Shultz & Zedeck, 2011; Holmquist, Shultz, Zedeck, & Oppenheimer, 2014; Curcio et al., 2014). They also point to both tests' failure to measure at all the other skills critical to successful law practice (Shultz & Zedeck, 2008; Shultz & Zedeck, 2011; Gerkman & Cornett, 2016; Holmquist et al., 2014; Curcio et al., 2014). Additionally, critics note that the tests are not designed to measure critical professional values such as commitment to pro bono work (Shultz & Zedeck, 2011). Test critics also point to the tests' discriminatory impact on people from under-represented communities and question whether that impact can be justified given the tests' limited ability to identify who will become strong lawyers and leaders (Taylor, 2019; Curcio et al., 2014; Glen, 2002).

Critiques that the LSAT and bar exams measure only a subset of critical lawyering skills echo critiques of legal education. Particularly in the last decade, there has been a public outcry over law schools' failure to help law students develop the wide range of skills lawyers need to represent clients effectively (Sullivan, Colby, Wegner, Bond, & Shulman, 2007; Cassidy, 2012). Public and market pressures led many law schools to increase their experiential learning courses and opportunities (Brooks, Dinerstine, & Epstein, 2015) and the ABA, in Standard 303(a)(3), changed its accreditation standards to require at least six experiential credit hours to graduate. (American Bar Association, 2018). While many law schools expanded experiential learning opportunities over the last decade, the LSAT and

the bar exam remained static as to which skills are tested, and how they are tested. To the extent law schools have shifted their curriculums toward more experiential learning courses, and to the extent there is agreement that performance in experiential learning courses is a useful measure of both academic performance and, ultimately performance as a lawyer, it is important to look at how experiential course performance relates to LSAT scores and bar exam passage.

By examining the association of LSAT scores, bar exam passage, performance in experiential and doctrinal law school courses, as well as overall performance in law school, this study adds to the growing body of literature about the LSAT and bar exam. It uses data, rather than experience and assumptions, to explore the critiques about the tests' relationship to lawyering skills. The study's data about the relationships between experiential learning course performance and LSAT scores and bar exam passage should inform test reform debates. The study also comes at a time when schools are particularly concerned about both bar passage and the intense scrutiny on, and potential changes to, the ABA's bar passage accreditation rules (Kinsler & Usman, 2018). To the extent the study provides data about the LSAT's relationship, or lack thereof, to bar passage, that information is important to schools as they seek to admit students likely to pass the bar exam. Additionally, both the LSAT and the bar exam have a disparate impact on people from under-represented communities (Kidder, 2001; Kidder, 2004; Taylor, 2014; Taylor, 2018). The study's data and conclusions may inform debates about the efficacy of the tests and discussions about how to reform them given their discriminatory impact on people from under-represented communities.

Finally, bar associations, the judiciary and the academy place high value on access to justice and developing lawyers' commitment to pro bono work (Faith-Slaker, 2018; Cummings & Sandefur, 2013). The LSAC makes no claim that LSAT scores measure proclivity to perform pro bono work. While one study found an inverse relationship between LSAT scores and engagement in pro bono work in practice (Shultz & Zedeck, 2011), we know of no study that examines whether LSAT scores relate to pro bono engagement during law school. By looking at relationships between LSAT scores and pro bono work during law school, the study addresses the question of whether LSAT scores relate at all to the key lawyering value of commitment to engage in pro bono work.

Research Questions

Question 1: How do LSAT scores relate to students' performance in doctrinal versus experiential learning courses and how does performance in doctrinal and experiential courses relate to first time bar passage?

Question 2: What predictive value does LSAT scores, performance in law school courses, first year GPA and overall GPA have for first time bar passage rates?

Question 3: How do law students' LSAT scores relate to self-reported pro bono hours during law school?

Literature Review

I. Relationship of Performance in Experiential Learning Courses to LSAT Scores and Bar Passage

While doctrinal courses teach and assess key lawyering skills, as many have noted, the ability to represent clients requires a wide range of additional skills not taught in those courses (Gerkman & Cornett, 2016; Shultz & Zedeck, 2008). Amongst those are skills such as: research, fact finding, writing, questioning, advocating, negotiating, planning and organizing, self-reflection, and collaboration (Shultz & Zedeck, 2008; Gerkman & Cornett, 2016).

Throughout much of the last 100 years, most law schools' curricula focused on a series of courses organized around discrete doctrinal legal areas. In those courses, students hone their abilities to read, analyze and discuss appellate legal opinions, discern legal rules, and apply those rules and the policy underlying them to new legal problems. Traditional doctrinal course assessments usually involve a final high stakes timed exam (Crane, 2000) modeled on the bar exam format and incorporating a combination of multiple choice, short answer and essay exam questions (Reeves, 2015). The vast majority of law school courses are doctrinal courses. To the extent relationships exist between LSAT scores and law school performance, and law school performance and the bar exam, because those tests assess similar skills in a similar way, the relationships are not surprising (Howarth, 1997).

Over the last decade, there has been significant pressure from the bench, bar and public for law schools to add more experiential learning into the curriculum to foster development of the wide range of skills lawyers need to represent clients (Brooks et al., 2015). Experiential learning for law students has been defined as the "integration of theory and practice by combining academic inquiry with actual experience" (Stuckey, 2007). Experiential learning courses encompass live client clinics, externships and simulation courses in which students apply legal knowledge to simulated or real world client problems with faculty supervision and feedback. Experiential course assessments usually include a variety of un-timed assignments that measure students' skills in a wide range of areas such as legal drafting, communication with clients and witnesses, legal advocacy, fact-finding, research, and ability to use and learn from feedback (Stuckey, 2007).

Proponents of the move toward more experiential education argued that law schools needed to do a better job of developing students' abilities to represent clients – especially because many were getting minimal training after graduation (Kuehn, 2014). In response to these concerns, ABA Standard 303 increased the minimum experiential learning credits required for graduation. (ABA, 2018). Many law schools responded to both market and public pressures and the ABA mandate both by increasing experiential course offerings and by integrating experiential exercises into more traditional doctrinal courses (Brooks et al., 2015).

While law schools have altered their curriculum to include more experiential learning, the LSAT and the bar exam have remained relatively stagnant. One question is how the increased emphasis on experiential learning relates to both the LSAT and the bar exam. One study indicated that while students' performance in doctrinal courses correlated to LSAT scores, their performance in their first year research and writing course did not correlate to their LSAT scores (Curcio, Jones, & Washington, 2007). That study was not a longitudinal one. Another study found that LSAT scores poorly predict grades in law school writing projects (Henderson, 2004). However, that study had limitations in that it did not control for differences in classes with and without curved grading (Henderson, 2004). Another

study found LSAT scores do not correlate with performance on oral arguments (Diaz, 2001). No studies have looked at the issue of the relationship of the LSAT's predictive value as it relates to experiential learning courses across time, courses, and at more than one school, while also controlling for whether the experiential and doctrinal course grades were curved or uncurved.

Just as there has been minimal study of the relationship of LSAT scores to experiential learning courses, there has been minimal exploration of how students' performance in experiential learning courses relates to bar exam passage. Two studies indicate the number of experiential learning courses taken have little or no effect on bar exam passage (Kuehn, 2019; Johns, 2018) while another shows some positive relationship between bar exam performance and participation in experiential learning courses (Austin, Christopher, & Dickinson, 2016). The Kuehn and Johns' studies focused on disproving a claim that recent increases in bar exam failures is due to the growth of students' engagement with experiential learning (and by implication, an avoidance of doctrinal bar-related coursework). We analyze the question from a different perspective. We look at law school course performance [via course grades] to analyze whether there is a difference in the relationship of performance in doctrinal versus experiential courses, to bar exam performance.

II. LSAT Scores Relationship to Academic Performance and the Bar Exam

A. Reasons Schools Rely Heavily on LSAT Scores in Admissions and Scholarship Decisions

Law schools seek to admit students based on "merit" yet most fail to do a robust, complex consideration of merit in the admission process. (Taylor, 2014; Taylor, 2018; Curcio et al., 2014). Instead, the default position is to define "merit" by looking at single-digit differences in LSAT scores and decimal point differences in undergraduate grades, with LSAT scores often playing an outsized role in both admissions and financial award decisions (Taylor, 2014; Taylor, 2018; Whitford, 2017).

The LSAC does not claim high LSAT scores equate to merit. In fact, it warns schools that LSAT scores are only valid as predictors of first year law school performance (Bernstine, n.d.). LSAC notes that the scores are only valid when looked at in "bands"² because of standard error of measurement (LSAT Score Bands n.d.) and cautions against undue reliance on the scaled score numerical value, instead, urging the use of score bands (Edwards, 2006). It also strongly urges schools to look at LSAT scores in conjunction with UGPA because the scores' predictive value increases when looking at the combination of LSAT scores and UGPA (Cautionary Policies, 2014). To encourage this practice, LSAC provides to each school, at no cost, an analysis that results in an index combining LSAT and UGPA. It also advises schools not to give the scores undue weight and to consider factors beyond scores in the admissions process (Cautionary Policies, 2014).

Despite the LSAC's warnings, many schools place great weight on numerical LSAT scores in the admissions process for numerous reasons. First, many faculty and admissions offices believe the scores are good predictors of students' academic success. For some schools, especially those with a wide spread of LSAT scores, LSAC studies support this (Dalessandro, Anthony, & Reese, 2013). However, as the LSAC itself recognizes, the LSAT's predictive value for, and correlations with, first year academic

² LSAC notes that like all standardized tests, the LSAT is not a perfect measurement. It therefore calculates score bands [scores that are plus or minus 3 points of the numerical scaled score] to account for standard error of measurement and it urges schools to use those bands, rather than the numerical scaled score, in making admissions decisions. (LSAT Score Bands n.d.)

performance³ vary greatly by school, with correlations ranging from .16 to .55 (Dalessandro et al., 2013; Wong, 1999; Kidder, 2001; Edwards, 2006). Thus, it is important to examine on a school by school basis, the predictive value of LSAT scores.

Another reason schools rely heavily on LSAT scores is a belief the scores predict bar passage. Again, ignoring LSAC's warnings to only look at the scores in context of their predictive value for first year law school performance and not as bar exam passage predictors (Cautionary Policies, 2014; Bernstine n.d.), schools also look to LSAT scores as predictors of bar exam success (Johns, 2017). In fact, the National Conference of Bar Examiners "recommends that law schools pay particular attention to LSAT scores in order to predict students at risk of bar exam failure" (Johns, 2017). Some recent studies found that, at some schools, the scores have limited predictive value for bar passage (Austin et al., 2016; Johns 2017; Farley et al., 2018) although other studies suggest that scores have a more robust relationship to bar passage (Sander & Steinbuch, 2017). On a related note, another study found that there is not necessarily support for the proposition that schools taking students with lower LSAT scores fully explains the recent decline in bar passage. A comprehensive California study found that a decline in LSAT scores only explains some portion of the decline in California bar exam scores and pass rates (Bolus, 2018). It is important to look at how LSAT scores relate to bar passage so that schools make admissions decisions based upon data, not assumptions.

Schools' desire to be ranked well by *U.S. News* may also lead to an overvaluation of LSAT scores in the admissions and financial award decision-making process. In calculating rankings, *US News* has a category entitled "selectivity." In that category, median LSAT and GRE scores are weighted at 12.5%, median UGPA is weighted at 10% [for a combined value of 22.5%], and acceptance ratio accounts for 2.5% of the overall ranking in the "selectivity" category (Morse & Hines, 2018). Actual outcomes data, such as bar exam passage accounts for only 2% and post-graduation employment accounts for 20% of the final overall rankings score (Morse & Hines, 2018). Because of the weight *US News* gives to LSAT scores, many schools over-emphasize numerical LSAT scores in admissions and scholarship decisions to increase their median score and thus their *US News* rankings (Taylor, 2018). Studying LSAT scores' as they relate to academic performance generally, experiential course performance specifically, and bar exam passage provides information to those questioning the weight *US News* gives the scores.

B. Why Be Concerned about Over-Reliance on LSAT Scores in the Admissions and Scholarship Award Decision Making Process

People of color are under-represented in the legal profession (Nance & Madsen, 2014; Taylor 2015). While people of color represent approximately 33% of the United States' population, they make up only 11% of the nations' lawyers (Nance & Madsen, 2014). One barrier to entry into the legal profession is the LSAT. This barrier is particularly acute for black and Latino test-takers whose average scores are significantly lower than their white and Asian counterparts (Taylor, 2018; Dalessandro,

³ Predictive modeling refers to a process of applying a statistical model or data mining algorithm to data for the purpose of predicting new or future observation (Shmueli, 2010). Several values are used to understand a predictive model [e.g., R squared indicates the percentage of law school first-year overall GPA variation that is explained by a regression model]. Correlation describes the patterns of data and means two things occur together in terms of "co-incidence". Correlational value indicates the strengths of the relationship between two or more measures [e.g. if you look at LSAT scores and course performance, how do those two things coincide to predict]. If a correlation is strong one, predictive power is likely to be great. Correlation is not equivalent to causation, and predictive value does not determine individual performance.

Anthony, & Reese, 2014). To the extent schools look largely to LSAT score numbers as proxies for merit, the scores, as currently used by law schools, limit access to legal education for non-white applicants (Taylor, 2015; Taylor, 2018; Reeves & Halikias, 2017; Kidder, 2001) and limit access to higher tiered law schools for non-white applicants (Taylor, 2015).

Additionally, LSAT score differences also play a significant role in who receives financial awards (Taylor 2018; Whitford, 2017). In the last decade, many schools have shifted significant scholarship money away from needs-based scholarships and toward using scholarship money to attract applicants with high LSAT scores (Taylor, 2018; Tamanaha, 2012; Haddon & Post, 2006; Whitford, 2017). Because those with high LSAT scores often come from families with higher socio-economic status (Taylor, 2018), the move to award scholarships to high LSAT score students often privileges the already privileged. (Taylor, 2018; Haddon & Post, 2006).

Schools have been using LSAT scores for decades (Haddon & Post, 2006). ABA Standard 503 requires schools to have a “valid and reliable” admissions test (ABA 2018) although it does not mandate the weight given to that test in the admissions process. Schools rely on LSAT scores, in part, because of custom and ease of use and a belief that the scores “level the playing field.” Many schools get thousands of applications and must choose between those applicants when filling limited seats in an incoming class. Schools need a way to distinguish between those applicants. LSAT scores are one way to do that. Unlike UGPAs, in which law schools try to compare grades from a wide range of institutions and across majors, LSAT scores have the theoretical appeal of a seemingly egalitarian approach to decision making because all applicants take the same test. However, that egalitarian notion is called into question when one looks at studies correlating test results with family wealth and education levels (Taylor, 2014; Taylor, 2015; Taylor, 2018). This is particularly problematic given that ABA reporting requirements and *US News* practices appear to suggest – contrary to LSAC guidance – that a single LSAT point captures a “merit” difference between applicants. Law schools are the gateway to increasing the profession’s diversity. If schools rely on LSAT scores – particularly single numerals -- as a proxy for merit, that decision impacts the profession’s diversity and impacts the opportunities provided to, and debt that is carried by, those from under-represented communities and lower socio-economic backgrounds (Taylor, 2018; Taylor, 2014).

Assuming we accept that LSAT scores have some role to play in the admissions and financial award decision-making processes, that role should be looked at in context of what the scores actually do and do not measure at a given school. To the extent law schools justify their reliance on LSAT scores in admissions and financial award decisions based upon the belief that the scores reflect “merit” because they help predict their students’ academic performance and bar passage, schools should substantiate those beliefs with data, especially in light of the scores’ disparate impact.

III. Pro Bono and Access to Justice

One key lawyering value is increasing access to justice and lawyers’ commitment to engage in pro bono work (Faith-Slaker, 2018; Cummings & Sandefur, 2013). Judges urge lawyers to engage in pro bono work (Secret, 2012; Faith-Slaker, 2018). Bar leaders have long sought to increase lawyer participation in pro bono and access to justice issues work (Faith-Slaker, 2018). Many law schools also have as part of their mission and learning outcomes a desire to inculcate the professional value of pro bono work in their students (Hamilton, 2018; Scharf & Merton, 2017).

Professors Shultz and Zedeck found a negative correlation between LSAT scores and engagement in pro bono work as a lawyer (Shultz & Zedeck, 2008; Holmquist et al., 2014). The LSAC does not suggest LSAT scores relate to proclivity to engage in pro bono work and we know of no studies that look at LSAT scores in conjunction with law school pro bono work. A positive or negative relationship between LSAT scores and that lawyering value might inform the weight some schools give to the scores, depending upon the schools' mission and commitment to pro bono and access to justice work.

Methodology

To understand the relationship between LSAT scores and law school student success as measured by law school academic performance and bar passage, we initiated a retrospective study requiring no student participation, using data from Georgia State University College of Law (GSU) and City University of New York Law School (CUNY). In this portion of the grant-funded research project, we examine relationships between: 1. Law School Admissions Test (hereafter LSAT) scores, Undergraduate Grade Point Averages (hereafter UGPA), and the combination of LSAT and UGPA and student performance in doctrinal courses and experiential courses, overall first year grades and final law school GPAs; and 2. LSAT scores, course performance, and final and first year GPAs and first-time bar passage. We also look at the relationship between LSAT scores and pro bono work performed in law school (GSU only). This part of the grant-funded study seeks to answer questions about the value schools place on LSAT scores in the admissions process.

Population

Institutional data of a total of 2,440 students who matriculated between Fall 2009 and Fall 2015 in GSU COL (N=1,492) and CUNY LS (N=948) were gathered for analysis. For this portion of the grant-funded project, no students were personally contacted. Demographic distribution of law school students is displayed for two law schools below (Table 1 & Figures 1, 2, & 3). Table 1 summarizes law school student demographics for each school. In the population studied, CUNY's students are more racially diverse than GSU's and CUNY has a larger percentage of women students.

Table 1. *Law School Student Demographic Summaries by School*

Demographics		CUNY		GSU		Combining Schools	
		N	%	N	%	N	%
Gender	Female	596	62.9%	682	45.7%	1278	52.4%
	Male	350	36.9%	806	54.0%	1156	47.4%
	Not Reported	2	.2%	4	.3%	6	.2%
Race	American Indian/Alaska Native	2	.2%	7	.5%	9	.4%
	Asian	121	12.8%	118	7.9%	239	9.8%
	Black	78	8.2%	150	10.1%	228	9.3%
	Native Hawaiian/Pacific Islander	1	.1%	4	.3%	5	.2%
	White	519	54.7%	1016	68.1%	1535	62.9%
	Multi-Racial	47	5.0%	21	1.4%	68	2.8%
	Not Reported	180	19.0%	176	11.8%	356	14.6%
Ethnicity	Non-Hispanic	768	81.0%	1392	93.3%	2160	88.5%
	Hispanic	156	16.5%	76	5.1%	232	9.5%
	Not Reported	24	2.5%	24	1.6%	48	2.0%

Variables

When examining the relationships of LSAT score and UGPA to law school academic performance measured as GPAs, independent variables consist of LSAT score and undergraduate GPA which were measured continuously. Dependent variables include grades in various law school courses (e.g., all required first-year course GPAs, selected upper level course GPAs), overall first year GPA and law school graduation GPA, which were measured as continuous variables.

When examining the relationships of LSAT score, UGPA, and law school academic performance to first time bar exam results, independent variables include LSAT score, undergraduate GPA, grades in various law school courses (e.g., first-year course GPAs, selected upper-level course GPAs), overall first year and law school graduation GPA, which were measured as continuous variables. The dependent variable is first-time bar exam passage result measured dichotomously in terms of Yes/No.

To answer questions about doctrinal versus experiential course performance, CUNY and GSU students' LSAT scores and UGPA were used separately to examine their relationships with students' academic performance (measured as GPAs). We looked at overall GPA in four categories: all first-year doctrinal courses,⁴ all first-year experiential courses,⁵ selected bar-tested upper level doctrinal courses,⁶ and selected upper level experiential courses,⁷ and calculated overall course GPAs by weighting course hours.⁸

⁴ GSU first-year doctrinal courses include: Property, Torts, Contracts, Civil Procedure, and Criminal Law. Between 2009-2014, Property, Contracts, Torts, and Civil Procedure were each six credit courses [three credits/Fall and three credits/Spring] and Criminal Law was a three credit course. In 2014, Torts and Property were reduced to four credit one-semester courses. CUNY first-year doctrinal courses include: Torts, Contract I and Contracts II, Civil Procedure, Con Law I, Family Law, Criminal Law. For each school, the overall weighted first year doctrinal GPA was used in our analysis.

⁵ GSU first-year experiential courses include: Fall and Spring Lawyering Foundations. Between 2009-2014, Lawyering Foundations was a Fall/Spring course with two credit hours in the Fall and two in the Spring. In 2014, Lawyering Foundations became a six credit course [three credits in the Fall and three credits in the Spring]. CUNY's first year experiential courses include: Lawyering Seminar I and II. For each school, the overall weighted first year experiential course GPA was used in our analysis.

⁶ GSU upper level doctrinal courses included in this study were: Con Law I, Evidence, Criminal Procedure I and Corporations. CUNY upper level doctrinal courses used in this study include: Property, Evidence, Criminal Procedure I, and Business Associations. For each school, the overall weighted upper level doctrinal course GPA was used in our analysis. The courses were chosen both because the content from these courses is tested on the bar exam and because it allowed us to measure similar doctrinal courses for each institution.

⁷ For GSU, only one upper level experiential course, Lawyering Advocacy, was included in the study. This was done because Lawyering Advocacy is a required course and because GSU grades doctrinal courses on a curve, while experiential courses, other than Lawyering Advocacy, are not graded on a curve. Using Lawyering Advocacy allowed us to compare course performance in what is a required modified curved upper level experiential course and curved doctrinal courses. At CUNY, faculty do not grade either doctrinal or experiential courses on a curve. For this study, CUNY upper level experiential courses included: Lawyering Seminar III, a required four credit hour course, and Clinics [all students must take at least one clinic and some took multiple clinics]. Clinic credit hours at CUNY range from 10-16 depending upon the course.

⁸ We weighted the course hours for both doctrinal and experiential courses for three reasons: 1) there were significantly more doctrinal course hours than experiential course hours for upper level experiential courses at GSU and in first year courses at both schools, 2) students did not all take identical courses, and 3) GSU's required course hours changed during the study period. For CUNY, first-year overall doctrinal course GPA, first-year overall experiential course GPA, upper level overall doctrinal course GPA were calculated by weighting all course GPAs and

CUNY and GSU have somewhat dissimilar grading practices. CUNY does not rank its students and it does not use a curved grading system for any courses. GSU utilizes a more traditional law school grading model, mandating curved grading in all first year doctrinal and experiential courses, as well as curved grading in large section upper level doctrinal courses [including the courses used in this study]. GSU uses a 4.3 grading scale, while CUNY uses a 4.0 scale.

The schools also vary in upper level experiential course requirements. CUNY requires students participate in a graded clinic worth between 10 to 16 credit hours, as well as an additional four-credit simulation course. Thus, during this study period, CUNY students took, at a minimum, 14 required credit hours of experiential learning. On the other hand, during the study period, GSU had only one required upper level experiential learning course: Lawyering Advocacy - a three-credit simulation course. Students had the choice of enrolling in other elective experiential courses. However, GSU grades most upper level doctrinal courses, including those used in this study, on a curve but does not have a curve for any experiential courses except for Lawyering Advocacy, which is graded on a modified curve. That required course consists of 12 student sections. Two or three students in each Lawyering Advocacy section may be awarded an A. The remaining students in each section are graded as Satisfactory/Unsatisfactory. Given that Lawyering Advocacy is the only GSU upper level course graded on a modified curve, it was the only experiential learning course that could be compared to the GSU curved doctrinal courses.

Analytical strategies

Descriptive statistics, such as means and frequencies, were calculated to understand general student academic performance and demographic distribution. Correlations were computed to examine the relationships between admissions data (i.e. LSAT score and UGPA) and law school academic performance (as defined above), respectively.

Inferential statistical tests, including linear regression, were used to determine how LSAT scores predict student course performance in law school. Logistic regression was used to explore how the combination of LSAT scores and course performance (doctrinal and experiential) predict bar exam passage. Logistic regression models were also produced to determine how students' bar exam success can be predicted by a combination of LSAT scores and overall first year/law school graduation GPAs.

GSU COL encourages students to engage in pro bono and public service work during law school and encourages them to report their pro bono and volunteer hours. At the time of this study, GSU's

credit hours indicated above in footnotes 4-7. Upper level overall experiential course GPA was calculated by weighting Lawyering Seminar III and all clinic courses that a student took [CUNY students took one to three clinic courses]. For GSU, first-year overall experiential course GPA was calculated by weighting Lawyering Foundations I and II. At GSU, the weighting process was particularly complex when calculating first-year overall doctrinal course GPA because GSU changed credit hours for required first year doctrinal courses in the middle of the study period. For GSU, we used the following process: 1) If students took Contracts I and II, Contracts GPA was calculated by weighting Contracts I and Contracts II with 6 credit hours. If students took either Contracts I or II, their Contracts GPA was represented by either Contracts I or II with 3 credit hours. The same procedures were applied to Civil Procedure I and II to represent overall Civil Procedure. 2) Credit hours in Torts and Property changed from 6 credits [two semesters] to 4 credits [one semester] in 2014. That change was accounted for in the weighting process. Thus, the GSU first-year overall doctrinal course GPA was calculated by weighting Torts, Contracts (overall), Property, Civil Procedure (overall), and Criminal Law. Upper level overall doctrinal course GPA was calculated by using at least 3 courses listed in the footnote 4, because not all students took all 4 upper level courses used in this study.

service hour self-reporting system encompassed a wide range of volunteer opportunities beyond those traditionally considered as lawyer pro bono work. Students who reported between 50-99 service hours graduated with pro bono distinction, those reporting 100-149 service hours graduated with high pro bono distinction, and those with 150 or more reported service hours graduated with highest pro bono distinction. Students voluntarily reported and updated their hours each semester before graduation. GSU’s graduation program noted students’ pro bono performance and students were encouraged to list the service distinction on their resumes. While CUNY encourages and supports pro bono and volunteer work, it does not track student pro bono hours. As a result, the analysis for Question 3 is limited to GSU.

Results

I. Student Composition Data

A. LSAT Scores and UGPAs

To put the analyses in this report in context, it is helpful to understand GSU and CUNY student populations in context of their respective LSAT scores and UGPAs. GSU students have a slightly higher mean LSAT score while both schools admit students with roughly equivalent mean UGPAs. CUNY students have a wider range of LSAT scores than GSU students, whereas GSU students have a wider range of UGPAs than CUNY students (Table 2 & Figures 4 & 5).

Table 2. *Distribution of LSAT Scores and UGPA by School*

		N	Minimum	Maximum	Mean	Std. Deviation	Median
CUNY	LSAT	927	138	171	154.83	4.52	154
	UGPA	905	2.02	4.00	3.31	.37	3.34
GSU	LSAT	1488	142	171	158.26	3.73	159
	UGPA	1472	1.82	4.06	3.36	.37	3.40

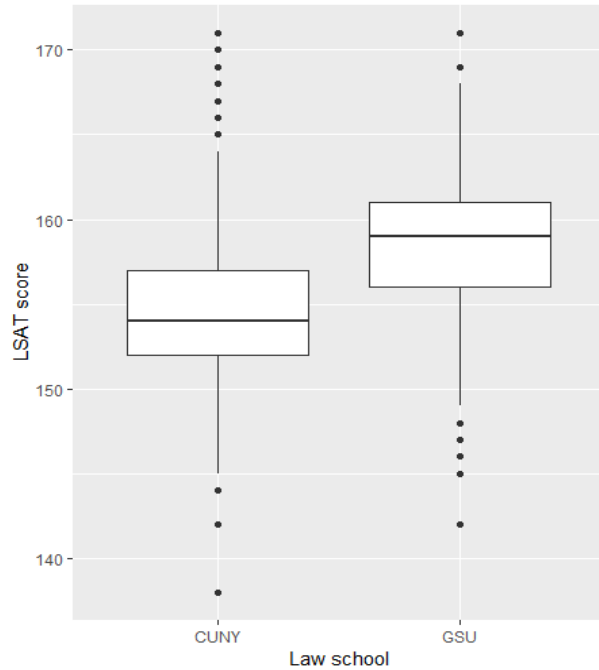


Figure 4. Distribution of LSAT Scores by School

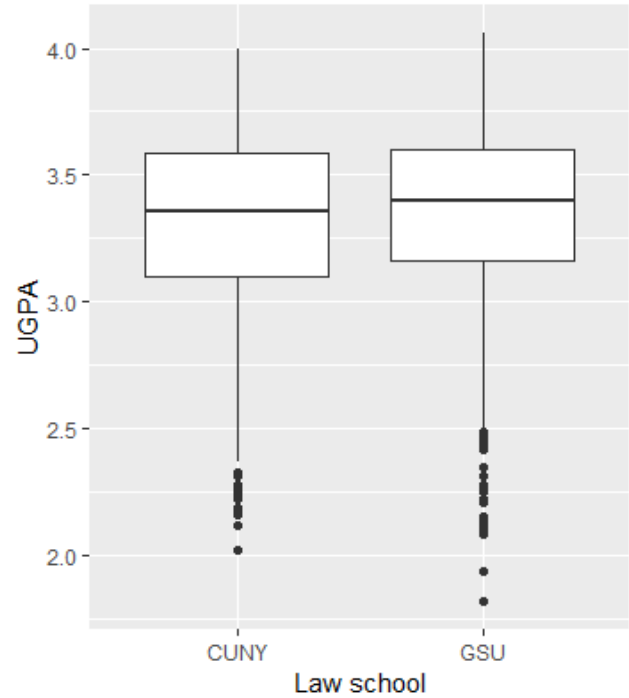


Figure 5. Distribution of UGPA by School

B. Comparisons of CUNY and GSU Mean and Median Course Performance

CUNY and GSU have different grading systems – CUNY does not use a curve and GSU has a mandatory curve for all first year courses and many upper level doctrinal courses. Again, to help add context to the study results, Table 3 sets out the means and standard deviations of law school course performance in terms of GPAs.⁹ Even with the different grading systems, the schools' means and median grades are not radically different.

⁹ We initially designed this study with plans to analyze and report combined data for both schools. However, because of differences in courses, and grading systems, we also analyzed each school separately. We report the data separately because we believe that analysis allows readers to see that even in schools with somewhat different student bodies, different courses, and different grading systems, the results are remarkably similar.

Table 3. Means, Standard Deviations, and Medians of Course Performance (GPAs) by School

	CUNY				GSU			
	Mean	N	SD	Median	Mean	N	SD	Median
Overall first-year doctrinal course GPA	2.97	870	.54	2.98	3.04	1343	.56	3.08
Overall first-year experiential course GPA	3.25	919	.62	3.30	3.01	1399	.67	3.00
Overall upper level doctrinal course GPA	3.12	750	.49	3.13	3.10	1166	.55	3.09
Overall upper level experiential course GPA	3.70	643	.36	3.78	-	-	-	-
First-Year GPA	3.09	916	.47	3.10	3.07	1330	.48	3.10
Graduation GPA	3.34	822	.37	3.34	3.22	1149	.37	3.23

Notes.

1. Due to grading system of the GSU upper level experiential course used in this study (12 student sections were graded generally as S/U with 2 or three students in each section getting an A), no mean and standard deviation were calculated for GSU upper level experiential courses.
2. CUNY upper level experiential courses used in this study were: Lawyering Seminar III [4 credits] and Clinics [10-16 credits per clinic]. Students were required to take at least one clinic. Most CUNY students in this study took one clinic courses, however a few took two or three clinics. We weighted the CUNY overall upper level experiential course GPA by Lawyering Seminar III and all clinic courses that each student took.

II. LSAT scores’ relationship to students’ performance in doctrinal versus experiential learning courses

A. Analyses of LSAT Scores and UGPA Relationships to Performance in Experiential and Doctrinal Courses, First Year Overall LGPA and Graduation LGPA

Correlations were analyzed among LSAT score, UGPA, and law school performance by school. As displayed in Table 4, results indicated that for GSU, LSAT score is significantly correlated with UGPA, and law school performance (small correlations). For CUNY, LSAT score is significantly correlated with law school performance (small correlations with first-year experiential course and upper level experiential GPAs, and moderate correlations with first-year doctrinal course GPA, upper level doctrinal course GPA, first-year cumulative GPA, and graduation GPA). LSAT score is not correlated with UGPA for CUNY.

Table 4. Correlations among the LSAT, UGPA, and Law School Academic Performance (GPAs) by School

	1	2	3	4	5	6	7	8
1. LSAT	-	.11**	.08**	.21**	.19**	-	.22**	.21**
2. UGPA	.05	-	.20**	.17**	.17**	-	.20**	.21**
3. FY-EX	.22**	.27**	-	.70**	.52**	-	.72**	.68**
4. FY-DT	.39**	.31**	.66**	-	.75**	-	.99**	.91**
5. UL-DT	.31**	.24**	.45**	.65**	-	-	.75**	.85**
6. UL-EX	.15**	.14**	.37**	.31**	.31**	-	-	-
7. FY_GPA	.38**	.33**	.75**	.92**	.63**	.35**	-	.92**
8. G_GPA	.42**	.34**	.72**	.87**	.79**	.80**	.91**	-

Notes.

1. *: $p < .05$, **: $p < .01$;
2. UGPA: Undergraduate GPA;
3. FY-EX: Overall first-year experiential course GPA;
4. FY-DT: Overall first-year doctrinal course GPA;
5. UL-DT: Overall upper level doctrinal course GPA;
6. UL-EX: Overall upper level experiential course GPA;
7. FY_GPA: First year cumulative GPA;
8. G_GPA: Law School graduation GPA;
9. GSU sample (N=1492) is presented above the diagonal. CUNY sample (N=948) is presented below.

Scatterplots were produced to show the distribution of LSAT score and law school course performance in terms of GPAs (Figures 6 & 7). Note that there is no scatterplot between LSAT score and upper level experiential course GPA for GSU (Figure 7) because the experiential learning Lawyering Advocacy course used in this study is graded dichotomously (Satisfactory/Non-satisfactory) with two or three of twelve students receiving an A. As displayed in Figures 6 and 7, scatterplots echo the correlation analysis summarized in Table 4. Particularly for GSU, the scatterplots indicate that when looking at doctrinal and experiential course GPAs, as well as overall First Year GPA and law school graduation GPA, GSU students' academic course performance allocates regardless of LSAT score distribution (Figure 7).

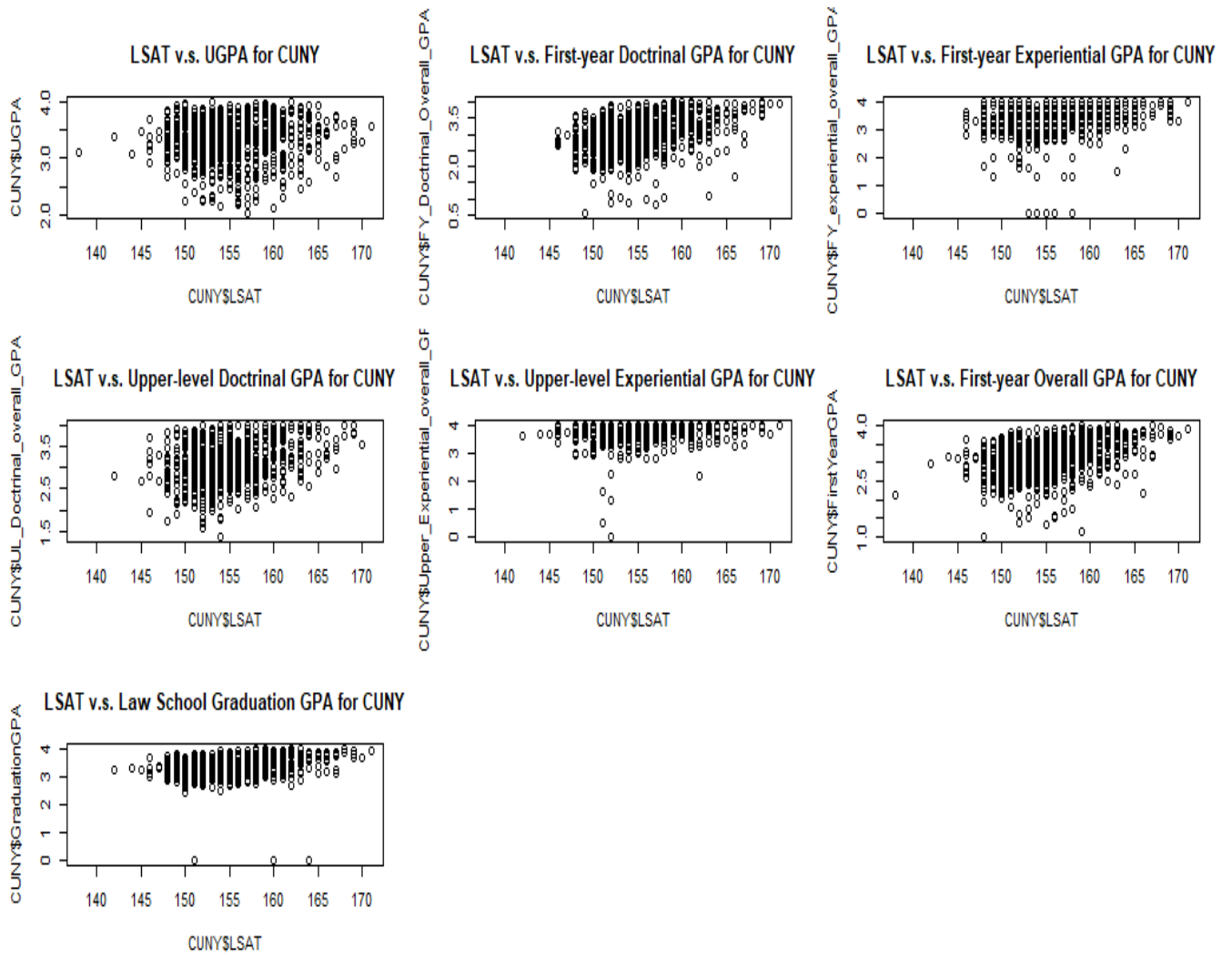


Figure 6. Scatterplots of Academic Course Performance and LSAT for CUNY

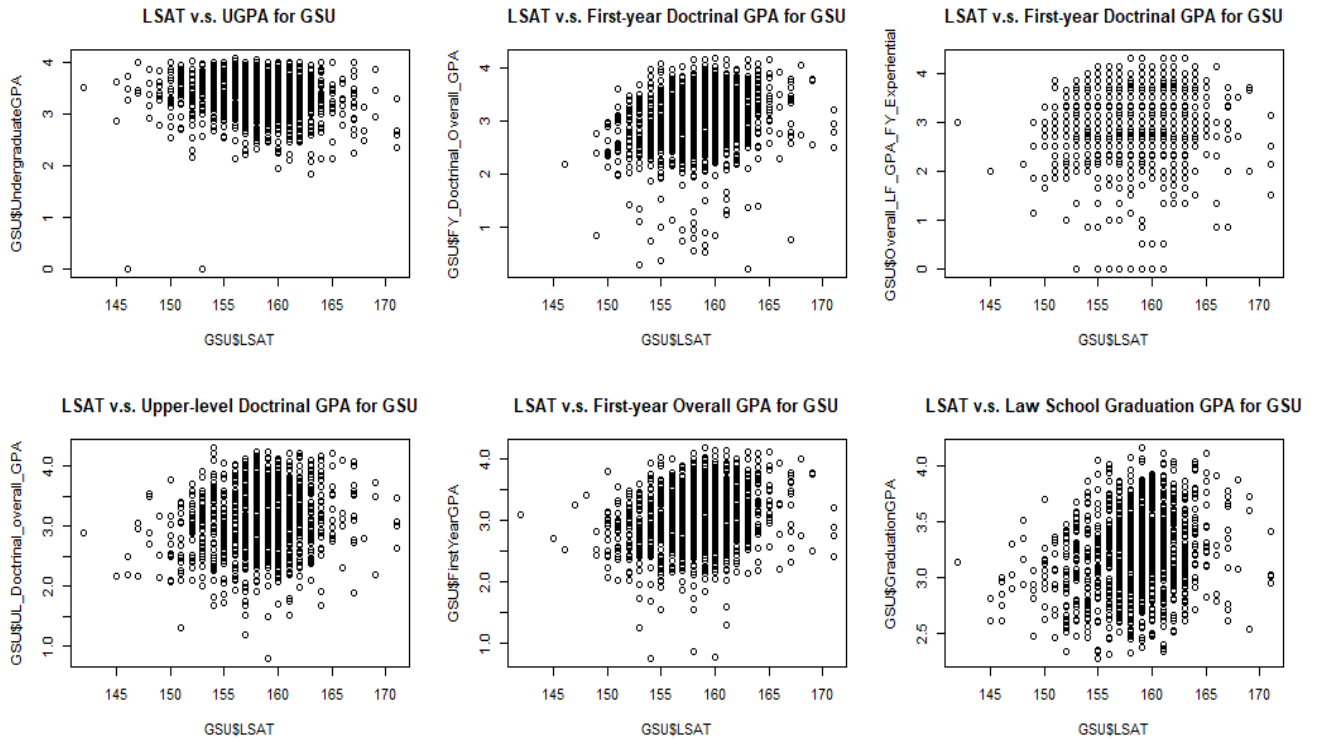


Figure 7. Scatterplots of Academic Course Performance and LSAT for GSU

B. LSAT as a single predictor of success

We analyzed how students' LSAT scores, UGPA, and combination of LSAT/UGPA associate with students' academic performance in both first year and upper level doctrinal and experiential courses.

For both schools, statistically, all the predictive models with LSAT as a single predictor were significant (Table 5). However, as a single predictor, LSAT score accounts for small variance in first year and overall academic performance, particularly at GSU (Table 5). At GSU, LSAT score as a single predictor accounts for 2% of the variance in first year GPA [FYGPA], and 4% of the variance in overall law school GPA [LGPA]. At CUNY, it accounts for 15% of the variance in first year GPA and 17% in overall law school GPA. Also, for both schools, statistically, LSAT score was a significantly weaker predictor of grades in experiential courses than doctrinal courses, both in first year and upper level courses, with the exception of GSU upper level experiential courses for which we were unable to make comparisons because of GSU's upper level doctrinal versus experiential course grading methodologies.

Table 5. Summary for Predictive Models of Academic Performance (GPAs) using LSAT as a Single Predictor by School¹⁰

	CUNY			GSU		
	B	R ²	F	B	R ²	F
FY_DT	.05***	.16	F(1,860) = 158.00***	.04***	.05	F(1,1341) = 64.31***
FY_EX	.03***	.05	F(1,896) = 45.17***	.02***	.007	F(1,1396) = 9.46***
UL_DT	.03***	.10	F(1,741) = 77.40***	.03***	.04	F(1,1162) = 42.64***
UL_EX	.01***	.02	F(1,639) = 15.21***	-	-	-
FY_GPA	.04***	.15	F(1,911) = 155.88***	.03***	.02	F(1,1327) = 25.79***
LGPA	.03***	.17	F(1,725) = 153.16***	.02***	.04	F(1,1143) = 50.35***

Notes.

1. FY_DT: Overall first-year doctrinal course GPA;
2. FY_EX: Overall first-year experiential course GPA;
3. UL_DT: Overall upper level doctrinal course GPA;
4. UL_EX: Overall upper level experiential course GPA;
5. FY_GPA: First year GPA;
6. LGPA: Law school graduation GPA;
7. ***: $p < .001$.

C. UGPA as a single predictor of success in doctrinal versus experiential courses and overall law school academic success

For both schools, all the predictive models with UGPA as a single predictor were significant (Table 6). Like LSAT score, UGPA as a single predictor, accounts for small variance in academic performance at both schools. At CUNY, compared to LSAT score, UGPA as a single predictor was a weaker predictor in first-year and upper level doctrinal courses and predicted similarly to LSAT score for experiential courses. At GSU, while LSAT score was a significantly stronger predictor than UGPA in explaining variance of first-year doctrinal course GPA, UGPA was a significantly stronger predictor than LSAT score in explaining variance of first-year experiential course GPA. LSAT score did not differ from UGPA in predicting other course performance.

¹⁰ For those unfamiliar with statistical models and terms, we have provided an appendix defining the variables used in this chart. For those interested in more information about these terms, see: <https://blog.minitab.com/blog/adventures-in-statistics-2/regression-analysis-how-do-i-interpret-r-squared-and-assess-the-goodness-of-fit> and <https://www.psywww.com/intropsych/ch01-psychology-and-science/correlation-and-prediction.html>

Table 6. Summary for Predictive Models of Academic Performance (GPAs) using UGPA as a Single Predictor by School

	CUNY			GSU		
	B	R ²	F	B	R ²	F
FY_DT	.46***	.10	F(1, 843) = 90.91***	.27***	.03	F(1, 1321) = 40.02***
FY_EX	.37***	.07	F(1, 879) = 69.84***	.37***	.04	F(1, 1377) = 54.91***
UL_DT	.33***	.06	F(1, 722) = 42.83***	.25***	.03	F(1, 1148) = 33.53***
UL_EX	.14***	.02	F(1, 620) = 12.53***	-	-	-
FY_GPA	.42***	.11	F(1, 889) = 108.91***	.27***	.04	F(1, 1308) = 53.60***
LGPA	.29***	.12	F(1, 708) = 92.03***	.21***	.04	F(1, 1129) = 51.50***

Notes.

1. FY_DT: Overall first-year doctrinal course GPA;
2. FY_EX: Overall first-year experiential course GPA;
3. UL_DT: Overall upper level doctrinal course GPA;
4. UL_EX: Overall upper level experiential course GPA;
5. FY_GPA: First year GPA;
6. LGPA: Law school graduation GPA;
7. ***: $p < .001$.

D. Combined LSAT scores and UGPA as predictors of success in doctrinal versus experiential courses and overall law school academic success

LSAC recommends that schools consider LSAT scores in combination with UGPA. Using that model, the combination of LSAT Score/UGPA shows a stronger prediction for student academic performance generally, and performance in both doctrinal and experiential courses, than either factor alone. The combination LSAT Score/UGPA predicts more weakly for experiential than doctrinal course performance at both schools. At GSU, even the combination of the two data points is a weak academic performance predictor, both for the first year, and overall (Table 7).

Table 7. Summary for Predictive Models of Academic Performance (GPAs) using Combination of LSAT and UGPA as Predictors by School

	CUNY				GSU			
	B (LSAT)	B (UGPA)	R ²	F	B (LSAT)	B (UGPA)	R ²	F
FY_DT	.05***	.44***	.25	F(1, 839) = 137.15***	.04***	.33***	.09	F(1, 1320) = 63.97***
FY_EX	.02***	.36***	.12	F(1, 874) = 60.25***	.02***	.40***	.05	F(1, 1375) = 36.65***
UL_DT	.04***	.32***	.15	F(1, 718) = 64.12***	.03***	.28***	.07	F(1, 1145) = 60.25***
UL_EX	.01***	.13***	.04	F(1, 617) = 12.79***	-	-	-	-
FY_GPA	.04***	.40***	.25	F(1, 884) = 141.12***	.03***	.31***	.10	F(1, 1306) = 72.71***
LGPA	.03***	.28***	.29	F(1, 705) = 143.71***	.02***	.23***	.09	F(1, 1124) = 57.45***

Notes.

1. FY_DT: Overall first-year doctrinal course GPA;
2. FY_EX: Overall first-year experiential course GPA;
3. UL_DT: Overall upper level doctrinal course GPA;
4. UL_EX: Overall upper level experiential course GPA;
5. FY-GPA: First year GPA;
6. LGPA: Law school graduation GPA;
7. ***: $p < .001$.

We also compared first-year overall GPAs with students' doctrinal course GPAs, experiential course GPAs, and graduation GPA by school. As shown in Figures 8 and 9, it appears that first-year overall GPA is more consistent with doctrinal course GPAs and graduation GPAs for both schools than experiential course GPAs. This finding is consistent with the fact that at both schools the first-year curriculum focuses on doctrinal courses and that students take substantially more doctrinal than experiential courses in the upper level curriculum.

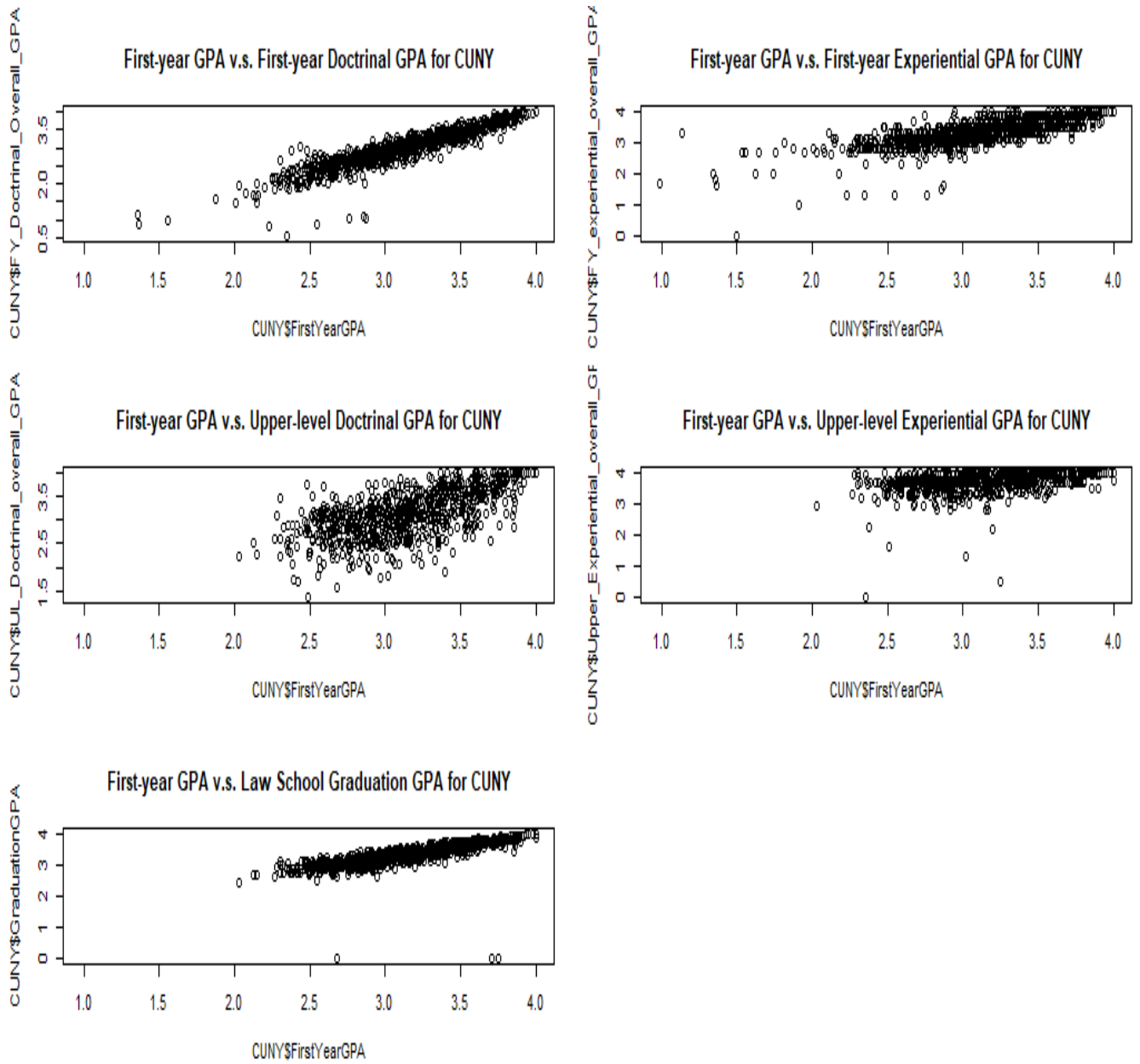


Figure 8. Scatterplots of Academic Course Performance for CUNY

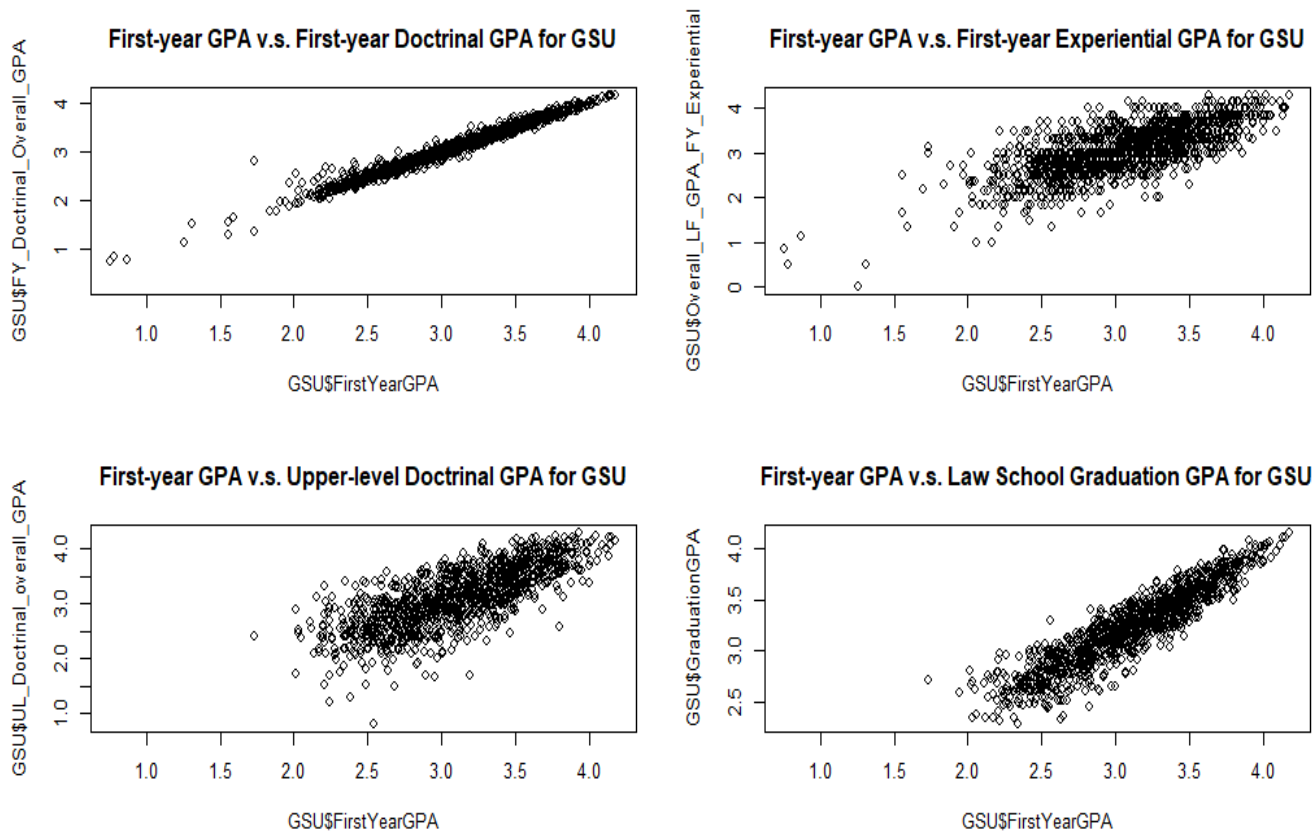


Figure 9. Scatterplots of Academic Course Performance for GSU

III. Relationship of LSAT, UGPA and performance in doctrinal and experiential courses and law school performance to first time bar passage

LSAT scores, UGPA, performance in first year and upper level experiential courses, performance in first year and selected upper level doctrinal courses,¹¹ first year overall law school GPA, and overall law school GPA were examined to predict first-time bar exam outcome. We conducted regression analyses for CUNY and GSU, separately.

Neither experiential course performance nor UGPA were significant factors in bar passage at either school. As reported in section IV below, LSAT scores, doctrinal course performance, first year overall law school GPA, and overall law school GPA related to first time bar exam passage for both schools.

¹¹ The selected upper-level doctrinal courses are bar tested. For a list of courses, see *supra.*, note 6.

IV. Relationship of LSAT scores, performance in law school courses, first year GPA and overall GPA for first time bar passage

We examined LSAT scores predictive value for first time bar passage separately, in combination with first year doctrinal courses, and in combination with selected upper level doctrinal courses. Results indicated that, statistically, as a single predictor, LSAT was a significant predictor of first-time bar passage for CUNY, $\chi^2(8) = 7.16$ (ns), and for GSU, $\chi^2(8) = 6.71$ (ns) (Table 8, Model 1s). However, for both schools, the combination of first-year and selected upper level doctrinal courses explain more variance in first-time bar passage than LSAT score alone does (Table 8, Model 2s and Model 3s). Furthermore, when one considers LSAT scores in conjunction with doctrinal course performance, LSAT scores explain little in terms of bar performance that is not already explained by the combination of law school first-year and upper level doctrinal course GPAs.

Table 8. Summary for Model Comparisons of Predicting First Time Bar Passage with LSAT and Course Performance by School

	Model 1				Model 2				Model 3			
CUNY	B	R ²	χ^2	PC	B	R ²	χ^2	PC	B	R ²	χ^2	PC
LSAT	.19***	.13	$\chi^2(8) = 7.16$ (ns)	79.8%					.13***	.31	$\chi^2(8) = 4.79$ (ns)	81.6%
FY-DT					2.21***	.29	$\chi^2(8) = 8.51$	80.8%	1.95***			
UL-DT					.95**		(ns)		.93**			
GSU												
LSAT	.20***	.11	$\chi^2(8) = 6.71$ (ns)	88.3%				89.7%	.14**	.30	$\chi^2(8) = 9.29$ (ns)	90.6%
FY-DT					2.12***	.28	$\chi^2(8) = 10.81$		1.94***			
UL-DT					1.21**		(ns)		1.18**			

Notes:

1. FY-DT = Overall first-year doctrinal course GPA, UL-DT = Overall upper level doctrinal course GPA;
2. Model 1: LSAT as a single predictor in determining first time bar passage;
3. Model 2: FY-DT and UL-DT as predictors in determining first time bar passage;
4. Model 3: LSAT, FY-DT, and UL-DT as predictors in determining first time bar passage;
5. **: $p < .01$, ***: $p < .001$;
6. PC=Percentage correct (predictive);
7. UGPA, first-year and upper level experiential course performance are not significant predictors in the models;
8. R² is Nagelkerke R Squared; we suggest interpreting this statistic with great caution.

In addition to examining LSAT score and doctrinal course performance with bar passage, we also looked at LSAT scores in combination with first year GPA, and LSAT scores in combination with graduation GPAs. Results indicated that a combination of LSAT score and first-year GPA statistically significantly predict bar passage for GSU, and the combination of LSAT and graduation GPA statistically significantly predict bar passage for GSU as well (Tables 9 and 10). Again, when combined with either first-year GPA or graduation GPA, the predictive value of LSAT score diminishes as compared to when one looks at it as a single factor.

For CUNY, results indicated the combination of LSAT score and first-year GPA as predictors does not show a good model fit in predicting bar passage. Additionally, for CUNY, the combination of graduation GPA and LSAT score also does not show a good model fit in predicting first-time bar passage (Table 10). Thus, for CUNY, unlike for GSU, one cannot look at the combination of LSAT score and first year GPA or LSAT and graduation GPA to predict bar passage. Instead, at CUNY, both predict as single

factors, with first year and upper level doctrinal GPA being a much stronger predictor of bar passage than LSAT score. Finally, for both schools, UGPA was not a significant predictor of bar exam results in all models generated below.

Table 9. Summary for Model Comparisons of Predicting Bar Passage with LSAT, First-Year GPA, Graduation GPA as a Single Predictor by School

CUNY	B	R ²	χ ²	PC
LSAT	.19***	.13	χ ² (8) =7.16 (ns)	79.8%
FYGPA	2.93***	.25	χ ² (8) =10.14 (ns)	80.4%
LGPA	3.16***	.20	χ ² (8) =13.78 (ns)	79.9%
GSU				
LSAT	.20***	.11	χ ² (8) =6.71 (ns)	88.3%
FYGPA	2.86***	.23	χ ² (8) =7.37 (ns)	88.9%
LGPA	3.81***	.27	χ ² (8) =10.40 (ns)	88.4%

Notes:

1. FYGPA = First-year overall GPA, LGPA = Law School Graduation GPA;
2. LSAT as a single predictor in determining first time bar passage;
3. FYGPA as a single predictor in determining first time bar passage;
4. LGPA as a single predictor in determining first time bar passage;
5. **: p<.01, ***: p<.001;
6. PC=Percentage correct (predictive);
7. UGPA is not a significant predictor in the models;
8. R² is Nagelkerke R Squared; we suggest interpreting this statistic with great caution.

Table 10. Summary for Model Comparisons of Predicting Bar Passage with Combination of LSAT and First-Year GPA and Combination of LSAT and Graduation GPA by School

Model 1					Model 2				
CUNY	B	R ²	χ ²	PC		B	R ²	χ ²	PC
LSAT	-	-	-	-	LSAT	-	-	-	-
FYGPA	-	-	-	-	LGPA	-	-	-	-
GSU									
LSAT	.17	.29	χ ² (8) =14.74 (ns),	89.2%	LSAT	.15	.32	χ ² (8) =14.74 (ns)	89%
FYGPA	2.67				LGPA	3.62			

Notes:

1. FYGPA = First-year overall GPA; LGPA = Law School Graduation GPA;
2. Model 1: LSAT and FYGPA as combined predictors in determining first time bar passage;
3. Model 2: LSAT and LGPA as combined predictors in determining first time bar passage;
4. **: p<.01, ***: p<.001;
5. PC=Percentage correct (predictive);
6. R² is Nagelkerke R Squared; we suggest interpreting this statistic with great caution.

V. LSAT scores relationship to pro bono work performed in law school

A total of 532 GSU COL students matriculating between 2009 – 2015 voluntarily submitted their pro bono and service work hours, ranging from 1.5 hours – 1192 hours. Using student reported pro bono and service hours, we found no relationship between LSAT scores and service work performed during law school (Figure 10). Nor did we find any statistically significant differences in gender or race in context of who was more or less likely to engage in service work during law school (as measured by self-reported service hours).

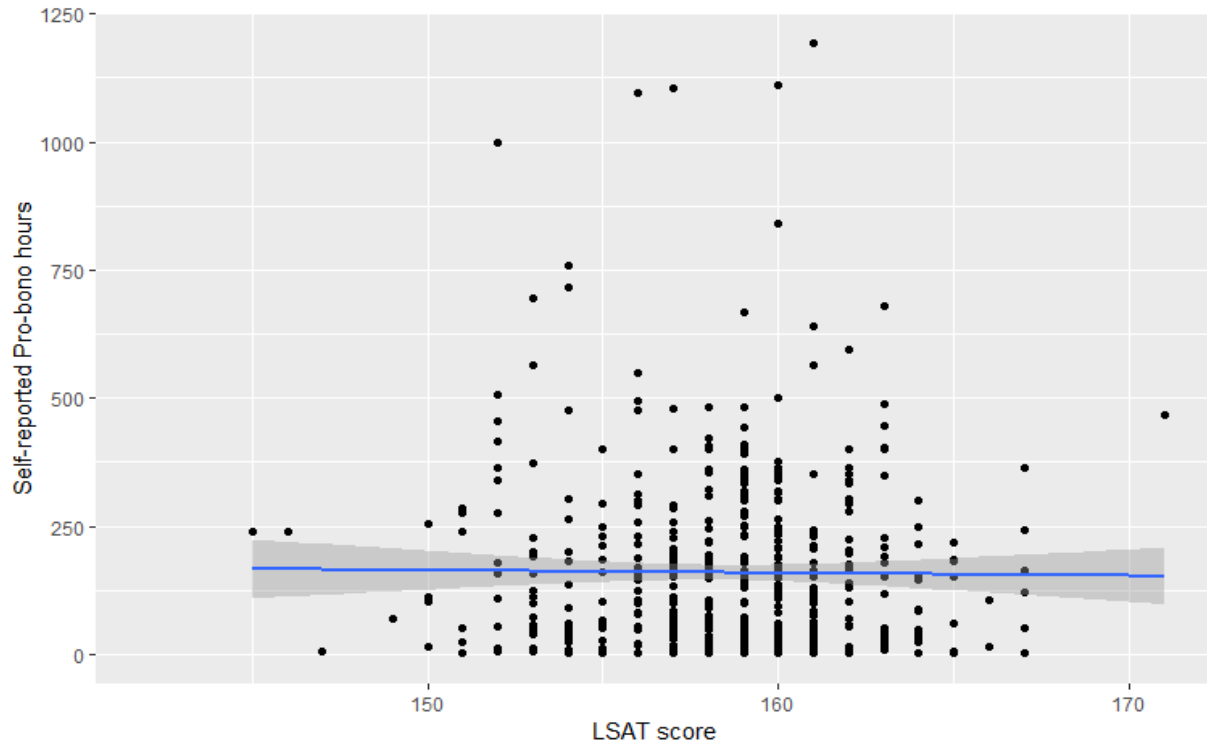


Figure 10. Correlation between LSAT Score and Reported Pro-Bono Hours

Discussion

At many law schools, faculty and admissions offices justify admissions and “merit” scholarship awards decisions based upon the belief that a student with an LSAT score one or two points higher than another is a “better” student. At some schools, data may not support those beliefs. Other scholars have found that LSAT scores as a single predictor have relatively weak value when it comes to law school academic success (Wong, 1999; Kidder, 2001; Edwards, 2006). This study found similar results. For the two schools studied, LSAT scores as a single predictor have a small predictive value when it comes to law school academic success. In fact, at GSU, LSAT as a single factor only accounts for 2% of variance in first year law school GPA (Table 5) and has small correlation with first year law school GPA (Table 4). The scatterplots for both schools demonstrate that LSAT scores weakly predict academic performance. Particularly at GSU, students’ academic course GPAs allocate regardless of LSAT score distribution. When used in conjunction with UGPA, as the LSAC suggests (Cautionary Policies, 2014), the first-year academic predictive value increases, but at GSU, the combined data points still accounts for 10% of variance in the first year academic performance (Table 7). This study suggests that, as LSAC cautions, the predictive value of LSAT scores varies from school to school. Additionally, it suggests that LSAT

scores probably predict less well than would justify the significance placed on them by admissions practices, *US News*, and customary understanding.¹²

Beyond the scores' value in predicting academic performance, another justification for reliance on LSAT scores in the admissions process is that the scores predict bar exam passage. Again, other studies question that assumption, finding weak associations between the scores and bar passage, especially when the scores are looked at in conjunction with actual academic performance (Farley, 2018; Johns, 2017). Thus, while LSAT scores have some predictive value for bar passage, the studies found that law school grades are much stronger predictors, and when you look at grades in conjunction with LSAT scores, the scores add little to predicting who will pass the bar exam. This study confirms those findings. At both CUNY and GSU, LSAT scores have minimal relationships to first time bar pass rates, especially when considered in context of law school course performance (Table 3 and Table 5). While at GSU, LSAT combined with law school grades builds a predictive model, at CUNY, one must look at each factor separately to predict bar passage. However, at both schools, LSAT scores have minimal relationships to bar passage when considered in conjunction with law school academic performance. We note that the results must be qualified by the fact that the schools studied have a narrow band of LSAT scores, and the median LSAT scores at both schools are higher than the national LSAT score median. The results might be different if either school admitted significant numbers of students with scores above or below the LSAT median score of 150 or had a wider spread of LSAT band scores. That said, the study results do indicate that for some schools, the belief that they must weight LSAT scores heavily in the admissions process because of bar exam passage concerns should be examined in light of actual data for that school.

In response to public and market pressures to better prepare law students for law practice, schools have begun including more experiential learning into their curriculums with the understanding that experiential learning courses are critical training for law practice (Brooks et al., 2015; Kuehn, 2014). Other studies have looked at LSAT scores' relationships between experiential and doctrinal courses but either did not do so in a longitudinal study or were unable to control for curved grading (Curcio et al., 2007; Henderson, 2004). We looked at this issue from a longitudinal perspective and we controlled for curved grading. Doing so, we found LSAT scores, as a single factor, relate to doctrinal course performance at both schools studied, although that relationship was weak at GSU. We also found the scores to be particularly weak predictors for experiential course success both in the first year and in the upper level curriculum at both schools. To the extent LSAT scores predict law school performance, they are stronger predictors of doctrinal course performance than experiential course performance.

To the extent that experiential courses are better preparation for (and grades in experiential courses are better measures of) the practice of law, the study results that LSAT scores relate relatively weakly to experiential course performance may be reason for caution about placing too much emphasis upon the scores. Assuming law schools seek to admit students who will be strong future lawyers and leaders, the limited predictive value of LSAT scores for experiential course performance should cause law schools to think hard about the weight placed on LSAT scores. In this regard, we note that UGPA is an equal, and in some instances a slightly better, predictor of experiential course performance.

¹² We again note that LSAC urges schools not to rely on individual score numbers, rather than score bands, it urges schools not to give LSAT scores undue weight in the admissions process, and it says schools should run their own analyses to determine the scores' predictive value for their institution (Cautionary policies, 2014). Further, the LSAT by design only purports to be predictive of first-year grades.

While we found experiential course performance relates weakly to LSAT scores, we also realize that even though schools have increased their experiential course offerings, doctrinal courses still are the predominant method of law school teaching at both schools studied. That said, the data suggests that, as schools continue to expand experiential course offerings, an exploration by LSAC of how to capture some of the skills measured in experiential learning courses would increase the predictive validity of the LSAT for those courses. Additionally, the Shultz & Zedeck study suggest that admissions tests that consider a wider range of lawyering skills also minimize the test's discriminatory impact (Shultz & Zedeck, 2008).

Other studies also have begun exploring the relationship between experiential learning courses and bar passage. Other studies found no relationship between the number of experiential learning credit hours and bar passage (Kuehn, 2019; Johns, 2018; Bolus 2018). Another shows some positive relationship between bar exam performance and participation in experiential learning courses (Austin et al., 2016). Our study adds to that literature. We did not look at participation in terms of credit hours, but instead looked at performance (i.e. grades). We found no relationship between experiential course performance and first-time bar exam passage.

On the other hand, doctrinal course performance predicts fairly strongly for bar passage. The relationships between LSAT scores, doctrinal course performance and first-time bar exam passage are not surprising. The LSAT, doctrinal courses, and the bar exam all test similar skills and test those skills in similar ways (Howarth, 1997). However, we note that the combination of the LSAT score, and first-year and upper-level doctrinal course performance only accounts for around 30% of variance in bar passage for both schools. Seventy percent of variance in bar passage remains unknown given the data we have for both schools. This suggests that, to the extent schools seek information about bar passage, they must look beyond LSAT scores and law school doctrinal course grades and engage in longitudinal studies of other potential factors both during law school and the bar study period such a students' study methods, motivation, self-confidence, financial-/family-/work-related obligations, etc. An initial exploration of those issues was begun in Part II of this grant-funded project. See, *A Preliminary Study Looking Beyond LSAT Scores and LGPA: Factors During the Bar Study Period That May Affect Bar Exam Passage*.

The study raises a concern about the bar exam itself. If lawyers, judges and state bar examiners believe that experiential courses are critical preparation for law practice, and performance in those classes is some indication of performance as a lawyer and/or readiness for practice, the fact that in this study we found no statistical relationship between experiential course performance and bar passage raises questions about the format and content of the bar exam. The data provides "food for thought" for those engaging in bar exam reform.

The study data also adds to criticisms about how *U.S. News* calculates rankings for a number of reasons. First, to the extent LSAT scores have limited predictive value in terms of law student academic success, bar success, and experiential course performance, it makes no sense that this input constitutes 12.5% of a law school's ranking. To the extent that LSAT and UGPA are stronger predictors for law school performance when combined (Tables 5-7), we question the scientific basis for evaluative information gained by the assignment by *U.S. News* of separate percentage values to these two data points. Additionally, the relatively weak relationship of LSAT scores to law school performance, as evidenced by this and other studies, calls into question why *US News* allots 12.5% of its rankings score to that data point while only allotting 2.5% to bar passage – a data point that actually might have an impact on law students' future.

Finally, the LSAC does not claim the LSAT measures commitment to pro bono, and, in fact, at the school studied, LSAT scores do not have any relationship to students' self-reported pro bono and service work hours during law school. To the extent law schools, the academy, and the profession, truly care about pro bono work, law schools and others should be studying whether there are admissions criterion that might predict commitment to that work.

Limitations and future studies

Like many other studies, this one has limitations. First, while LSAT scores range from 120 to 180, both schools studied here had relatively narrow LSAT score ranges: 138-171 with a median of 154 for CUNY and 142-171 with a median of 159 for GSU (Table 2). Thus, this study's results may not be generalizable across the entire spectrum of law schools because of schools' varying LSAT ranges. Further, all studies of the LSAT's predictive value are limited by the fact that the cohorts studied are students accepted into a law school. Those with particularly low LSAT scores are unlikely to be admitted into law school, and it is impossible to test how LSAT scores at the low end of the spectrum relate to any of the factors discussed in this study.

Another limitation of this study are the differences between the two schools' grading systems. CUNY does not use a curved grading system while GSU grades on a curve for many courses. Interestingly, the median grades at both schools were remarkably similar. Likewise, the overall findings that the LSAT related more weakly to experiential than doctrinal courses was the same at both schools, as was the lack of relationship between experiential course performance, UGPA and first time bar passage. That said, the different grading systems required a separate analysis for both schools. Future studies may want to look at schools with more similar grading systems to create larger data sets.

The third limitation involves differences between doctrinal and experiential course credit hours and consistency in experiential courses taken. In the first year at both schools, the experiential course credit hours were significantly less than the doctrinal credit hours. Also, in the midst of this study, GSU changed its required experiential course credit hours for the first year from four to six. It also reduced the credit hours for two doctrinal courses from six to four, so that the first-year overall course-taking experience for GSU students varied over the course of this study – a factor for which we could not control. For the upper level credits, at GSU while most upper level doctrinal courses are curved, upper level experiential courses, with the exception of Lawyering Advocacy, are either graded as S/U or un-curved with a much higher median grade than doctrinal course medians. Because GSU curves the majority of upper level doctrinal courses and does not curve upper level experiential courses, at GSU, only one upper level experiential course was included in the study. The fact that we used only one upper level experiential course in the GSU calculations limits the findings with regard to upper level experiential courses for GSU. For CUNY, we did not have the issue of fewer upper level experiential versus doctrinal course credit hours. CUNY upper level doctrinal credit hours were weighted by four or more bar-tested doctrinal courses (usually three credits each) while upper level experiential courses were weighted by one required experiential simulation course (four credits) and other clinic courses (10-16 credits each) with the majority of students taking one clinic but some taking two or three clinic courses. While the majority of CUNY students in this study had a relatively similar number of doctrinal and experiential credit hours, the upper level experiential courses varied because CUNY students had the choice of 18 clinic courses. Thus, when we weighted CUNY experiential course performance, students' upper level experiential course performance was based on a range of courses and a range of

course credit hours as compared to relatively consistent doctrinal courses and doctrinal course credit hours.

Finally, we recognize that the study leaves a fundamental question unanswered: what other admissions measures could schools use, either in addition to, or in place of, the LSAT?¹³ One comprehensive study found that tests administered in conjunction with the LSAT better assess a wider range of lawyering skills with a smaller discriminatory impact (Shultz & Zedeck, 2008; Holmquist et al., 2014). While some may critique the Shultz/Zedeck proto-type test as “coachable”, the test authors suggest that “coachability” issues are not a given, and could be worked through in test development (Holmquist, 2014). In the undergraduate realm, there are prototype tests that test for a wider range of interpersonal skills and judgment than the SAT (Sternberg, 2006). Both the Shultz/Zedeck study and Sternberg’s work, provide fertile ground for further exploration. Also, one comprehensive study identified factors beyond LSAT scores that predicted academic success (Marks & Moss, 2016). Those factors, if further studied, could potentially supplement the LSAT. Additionally, one study indicates that a major university de-emphasized standardized test scores, engaged in data analytics to identify factors impeding students’ success, and designed interventions to alleviate those factors. That university achieved significant success in increasing both diversity and graduation rates (Renick, 2015). One law school with a range of LSAT scores has achieved a very high bar passage rate by employing a holistic teaching method based upon neuro-scientific learning principles (Schulze, 2017). Thus, there are potential avenues that to explore if schools sought to place less reliance upon LSAT scores in the admissions process or if test developers sought to design tests that encompassed a wider range of lawyering skills. While this study does not address how to develop alternatives to the LSAT, the findings do provide evidence of the need to consider doing so.

Conclusion

The study demonstrates that at some schools LSAT scores have limited value in predicting bar exam passage, and that at some schools the scores may have little relationship to doctrinal or overall academic course performance. The study confirms that schools should, at a minimum, follow the LSAC’s Cautionary Policies in their use of LSAT and run their own data on the LSAT’s predictive value. To the extent a school relies heavily on LSAT scores for admissions and scholarship awards, and those scores weakly predict academic success and bar passage for that institution, schools should be cognizant of that data as they evaluate how they use LSAT scores. Knowing the disparate impact those scores have on applicants from under-represented communities, a school should be particularly cautious in relying too heavily on the scores in their admissions and scholarship awards process if their own data indicates the scores have minimal predictive value for their students.

The study found LSAT scores have limited relationship to experiential course performance. That finding suggests that as schools increase experiential learning opportunities, any admissions test that seeks to predict law school performance should capture a wider range of skills lawyers need. Adjusting the test to encompass a wider range of lawyering skills also has the potential benefit of increasing the test’s predictive value, minimizing its discriminatory impact (Shultz and Zedeck, 2008), and increasing its

¹³ While some schools have begun using GRE scores rather than LSAT scores, that test has not been thoroughly vetted as a reliable predictor of law school performance, and like the LSAT, it has a discriminatory impact on test-takers from under-represented communities (Sternberg & Williams, 1997; Miller & Stassun, 2014). Additionally, the GRE, like the LSAT does not, address the big picture issue of finding assessments that better predict whether law school applicants have the wide range of skills necessary to become good lawyers.

relationship to the ultimate goal of the law school admissions process: identifying those who will be strong lawyers and leaders.

Another study finding is that experiential course performance has a non-significant relationship to first-time bar passage at these schools. While the fact that there is no correlation between performance in experiential learning courses and first-time bar exam passage at these two law schools is not surprising, it is concerning. If state bar exams seek to admit competent lawyers, the tests certainly should not simply relate to the limited skills assessed in doctrinal courses. They should also relate to the broader array of skills measured in experiential learning courses – the courses that assess a much wider range of skills lawyers need to competently represent clients, and that assess those skills in ways that relate much better to law practice than the ability to answer multiple choice questions in a high stakes timed assessment.

In sum, we recommend that the academy, bench, bar and public recognize and appreciate the actual utility of the LSAT and the limitations of bar exam and advocate for the development of more comprehensive evaluations to be used both for admissions to law school and admission to practice.

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Appendix A LIST OF ABBREVIATIONS AND SYMBOLS

<i>B:</i>	Coefficient. In linear regression model (e.g., using LSAT score to predict law school performance), B represents "the change in Y with one unit change in X" (e.g., the change in law school performance with one unit change in LSAT score). In logistic regression (e.g., using LSAT score to predict bar exam passage), B can be interpreted as odd ratio. For example, if B=2.12, the probability that bar exam passage equals 1 (one passed) is twice as likely (2.12 times to be exact) as the value of LSAT score is increased one unit.
<i>df:</i>	Degree of freedom
<i>F:</i>	F-test for R-squared of regression model, a significant F value indicates a significant model fit
<i>Mean:</i>	The sum of a set of measurements divided by the number of measurements in the set
<i>Median:</i>	The middle value in the list of numbers of measurement
<i>N:</i>	Population size
<i>p:</i>	Possibility associated with the occurrence under the null hypothesis of a value as extreme as or more extreme than observed value
<i>PC:</i>	Percentage Correct
<i>R:</i>	Pearson product-moment correlation
<i>R²:</i>	A statistical measure that represents the proportion of the variance for a dependent (outcome) variable that's explained by an independent variable or variables (predictor/combination of predictors) in a regression model
<i>Standard Deviation:</i>	A measure of how spread out numbers are relative to its mean
<i>χ²:</i>	Computed value of Chi-square, which is used to compare the fit of the model with and without the
<i><:</i>	Less than
<i>=:</i>	Equal to