LSAT TECHNICAL REPORT SERIES

- **The Validity of Law School Admission Test Scores for Repeat Test Takers: 2005 Through 2008 Entering Law School Classes**

  Andrea Thornton Sweeney
  Laura A. Marcus
  Lynda M. Reese

- **Law School Admission Council**
  LSAT Technical Report 10-02
  October 2010

The Law School Admission Council (LSAC) is a nonprofit corporation that provides unique, state-of-the-art admission products and services to ease the admission process for law schools and their applicants worldwide. More than 200 law schools in the United States, Canada, and Australia are members of the Council and benefit from LSAC's services.

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Executive Summary

When faced with multiple scores from repeat test takers, users of standardized assessments typically employ three indices—most recent, highest, and average scores—in order to summarize an individual's related performance. This study examines the validity of these three indices for Law School Admission Test (LSAT) scores in terms of predicting first-year averages (FYAs). A fourth index—the initial score—was also considered in order to provide additional baseline information. Confirming earlier research study results, this study found that, among the indices considered, the simple arithmetic average of multiple scores provided the best prediction of subsequent law school performance for repeat test takers. This finding held when LSAT scores were considered alone or in combination with undergraduate grade point averages (UGPAs).

Note that this and previous studies also underscore the need to consider individual circumstances when evaluating scores for repeat test takers. That is, score users should evaluate multiple scores in the context of any additional valid documentation that might be available suggesting that any of an applicant's test scores may not accurately reflect his or her actual abilities.

The current study was based on data from U.S. ABA-approved law schools that participated in the 2008 and 2009 LSAT Correlation Studies. Results for four entering classes, from the fall of 2005 through the fall of 2008, were combined within each school. The sample contains only the 184 schools whose combined enrollment included a total of 50 or more first-year students who had taken the LSAT on more than one occasion. Data were combined across 4 years, as available, in order to obtain sample sizes large enough to ensure stability in the validity estimates. In addition to validity results, this study provides descriptive summaries comparing one-time test takers with repeat test takers. Repeat test takers tend to earn lower LSAT scores than one-time test takers regardless of whether the most recent, initial, highest, or average score is considered. One-time test takers also tend to have slightly higher UGPAs and FYAs.

Introduction

How to treat multiple Law School Admission Test (LSAT) scores for a single law school applicant has long been of concern to law school admission committees. Wightman (1990) recommended using the arithmetic average of LSAT test scores and concluded that an applicant's first-year law school performance is more accurately predicted by the average of the LSAT scores than by the most recent score, the initial score, or the highest score. In the regular monitoring of this issue, Dalessandro and McLeod (1998); Stilwell, Thornton, and Pashley (2002); and Thornton, Stilwell, and Reese (2006) confirmed this conclusion using data on the current 120–180 LSAT score scale. The current study re-evaluates the recommendation of these previous studies.

This study is a partial replication of the Wightman (1990) study but more closely resembles the Dalessandro and McLeod (1998), Stilwell et al. (2002), and Thornton et al. (2006) studies. It is designed to address the following questions:

1. Do the traditional predictors of first-year law school performance—LSAT or UGPA, or the combination of both of these predictors—result in differential prediction between repeat test takers and one-time test takers?

2. If applicants have multiple LSAT scores, is the arithmetic average of test scores more accurate for predicting first-year law school performance than the most recent, initial, or highest score?

In addition, this report includes descriptive data comparing one-time test takers with repeat test takers.

The Thornton et al. (2006) study included 131,007 first-year students entering 177 law schools in the fall of 2001 through the fall of 2004. Approximately 77.8% of these students had only one LSAT score, 20.6% had two scores, and 1.6% had three scores.

The present study uses the same criteria for inclusion that was used in Dalessandro and McLeod (1998), Stilwell et al. (2002), Thornton et al. (2006), and Wightman (1990) of 50 or more repeat test takers per law school. Data were combined for students entering law school in the fall of 2005, fall of 2006, fall of 2007, and fall of 2008.

Methods

Sample

The sample used in this study was drawn from a pool of 137,912 law school students whose records from 186 law schools were used in the 2008 and 2009 LSAT Correlation Studies. These students entered law school in the fall of 2005 through the fall of 2008. The data from the four classes were combined in order to increase the number of records for repeat test takers, both to ensure stability in the analyses and to increase the representation of law schools. There were 136,856 students included in this study. Approximately 68.8% of these had only one LSAT score, 28.0% had two scores, and 3.2% had three scores. (Only the three most recent scores were retained in the database used.) The number of matriculants with more than three LSAT scores was found to be very small. Given their small numbers and the fact that they probably represent special circumstances, they were removed from the analyses. The percentage of repeat test takers increased slightly across the 4 years.

Schools were omitted from the sample if they did not have 50 or more students who had repeated the LSAT at least once or if they had changed their method of reporting FYAs during the years analyzed. Data were analyzed separately for the 184 law schools included in the sample. On average, there were approximately 232 repeat test takers and 512 one-time test takers represented in each school. The large repeater sample size is primarily a result of including 4 years of student data in the study, when available. Schools participating in the correlation studies for the first time may have only provided data for 1 year. The largest number of repeat test takers in a school was 1,521 out of 2,584 total test takers. The percentage of repeat test takers in the current study's law schools ranged from a minimum of 14.1% to a maximum of 58.9%. The previous study's repeater percentages ranged from a minimum of 8.2% to a maximum of 52.1%.

LSAT Version

All students whose data were used in this study were tested with the version of the LSAT that includes five 35-minute sections. One section is a variable section that contains material used to pretest new questions or pre-equate new test forms. The variable section does not contribute to the test taker's score. The other four sections contain items designed to measure reading comprehension, logical reasoning, and analytical reasoning proficiency. The specific item-type makeup for the testing years covered in this report was as follows:

Item Type	No. of Items	Time	No. of Sections
Reading Comprehension	26–28	35 minutes	1
Logical Reasoning	24–26	35 minutes	2
Analytical Reasoning	22–24	35 minutes	1

The total number of scored items is usually 100–102. A single LSAT score derived from the sum of the total number of questions answered correctly across the four scored sections is reported on a scale that ranges from 120 to 180. These scaled scores allow for comparison of scores achieved on different forms of the test. For example, regardless of the form administered, a scaled score of 150 reflects the same level of proficiency. A 35-minute writing sample is administered at the end of the test. These samples are sent to all schools to which the test taker applies, but they are not scored.

Variables Used in the Study

The variables analyzed in this study—FYA, UGPA, and LSAT score—are the same ones that are currently used in the Law School Admission Council (LSAC)–sponsored correlation studies. Only students for whom data were available on each of the three variables were included in this study. LSAT score and UGPA are the predictor variables; FYA is the criterion variable (i.e., LSAT and UGPA are the variables that are used to predict FYA).

Additional operational details related to these three variables are given below:

- *First-year average*. This variable is the average grade earned by the student in the first year of law school. FYA is provided for each student by the individual law schools. Different law schools use different scales for first-year grades. In order to maintain the confidentiality of the individual schools and to allow direct comparison across law schools, FYA values were transformed to a scale having a mean of 50 and a standard deviation of 10. Results presented in this report are on the transformed 50/10 scale.

- *Undergraduate grade point average*. The average grade earned by each student during his or her undergraduate study was computed by the Law School Data Assembly Service (LSDAS), according to LSDAS procedures, following the computing options selected for the undergraduate school the student attended.

Grades computed in this manner are expressed on a scale from 0.00 to 4.33. The UGPAs used in these studies were the same as those used in the correlation studies carried out for individual law schools.

- *LSAT scores.* Four different LSAT scores were analyzed for repeat test takers as part of this study: (1) the most recent LSAT score earned by the test taker, (2) the initial score of the two or three (three is the maximum number considered in this study), (3) the higher of the two scores or the highest of the three scores, and (4) the average of the two or three scores. Only LSAT scores reported on the 120–180 score scale were used in this study.

Analysis Methods

A primary focus of this study is the impact on predictive validity of using different LSAT scores for repeat test takers. That is, what LSAT score for repeat test takers most accurately predicts their subsequent performance in law school? The same analyses that are used in the ongoing predictive validity studies for individual schools that participate in the correlation studies are used in this study. That is, least-squares regression analysis is used to predict FYA from UGPA and the various LSAT scores for repeat test takers. The analyses are carried out for each individual law school using the pooled 4-year data. Adjustments are not made for differences among undergraduate institutions when combining across undergraduate schools to analyze UGPAs. The acceptability of unadjusted undergraduate grades is supported by Rock and Evans (1982), who found that (1) much of the gain in prediction disappears when the adjusted grades are used in conjunction with the LSAT to predict FYA; and (2) schools for which adjustment was successful in one year were not necessarily those for which adjustment was successful in a subsequent year.

For students with only one LSAT score, the data are the same for each comparison. For repeat test takers, each analysis is based on a different LSAT score: the most recent, initial, highest, or average.

Results

The results from this study are presented in two parts. The first part includes descriptive data about the one-time and repeat test takers. The results of applying the various prediction equations (derived using data from the total group—i.e., both one-time and repeat test takers) to repeat test takers are reported in the second part.

Descriptive Statistics

Descriptive statistics for the sample of students within the law schools used in this study are presented in Table 1 and Figures 1–12. These data provide summary information about the number and proportion of one-time and repeat test takers among the first-year law students in the schools included in this study. This allows for the comparison of LSAT performance, UGPA, and performance in the first year of law school between one-time and repeat test takers.

Table 1 provides information about the prevalence of repeat test takers in the entering classes included in this study. For the pooled data, 31.2% of the students took the LSAT more than once. Overall, the percentage of repeat test takers increased over the 4 years covered in this study. While for the 2005–2006 entering class data 25.4% of the students had taken the LSAT more than once, the last entering class included (2008–2009) had 39.3% repeat test takers. Recall that schools were omitted from the current study if they did not have at least 50 repeat test takers or if they had changed their method of reporting FYA during the years analyzed.

TABLE 1
Number and percentage of one-time and repeat test takers among schools included in this study

Entering Class	Total	No. of Schools	Repeat Test Takers		One-Time Test Takers	
			N	%	N	%
2005–2006	32,955	168	8,368	25.4	24,587	74.6
2006–2007	33,931	173	9,212	27.2	24,719	72.9
2007–2008	35,039	179	11,432	32.6	23,607	67.4
2008–2009	34,931	178	13,711	39.3	21,220	60.8
Pooled data	136,856	184	42,723	31.2	94,133	68.8

The current study investigates repeat test takers' performances at 184 law schools. The act of pooling data across 4 years contributed to the large sample size. Notably, not only did the percentage of repeat test takers increase over the years studied, but the combined repeater percentage (31.2%) increased from the percentages reported in Thornton et al. (2006), Stilwell et al. (2002), and Dalessandro and McLeod (1998): 22.2%, 22.5%, and 22.4%, respectively. Thornton, Marcus, Amodeo, and Reese (2008) corroborated this increase over the current report's time frame, reporting a 22.67% and 24.80% repeater rate for 2005–2006 and 2006–2007, respectively. Using the same data sources as those used in Thornton et al. (2008), repeater rates of 28.11% for 2007–2008 and 29.23% for 2008–2009 were found.

The distribution presented in Figure 1 displays the percentage of repeat test takers at each of the 184 law schools included in this study. Repeat test takers comprised 14–59% of the entering classes studied.
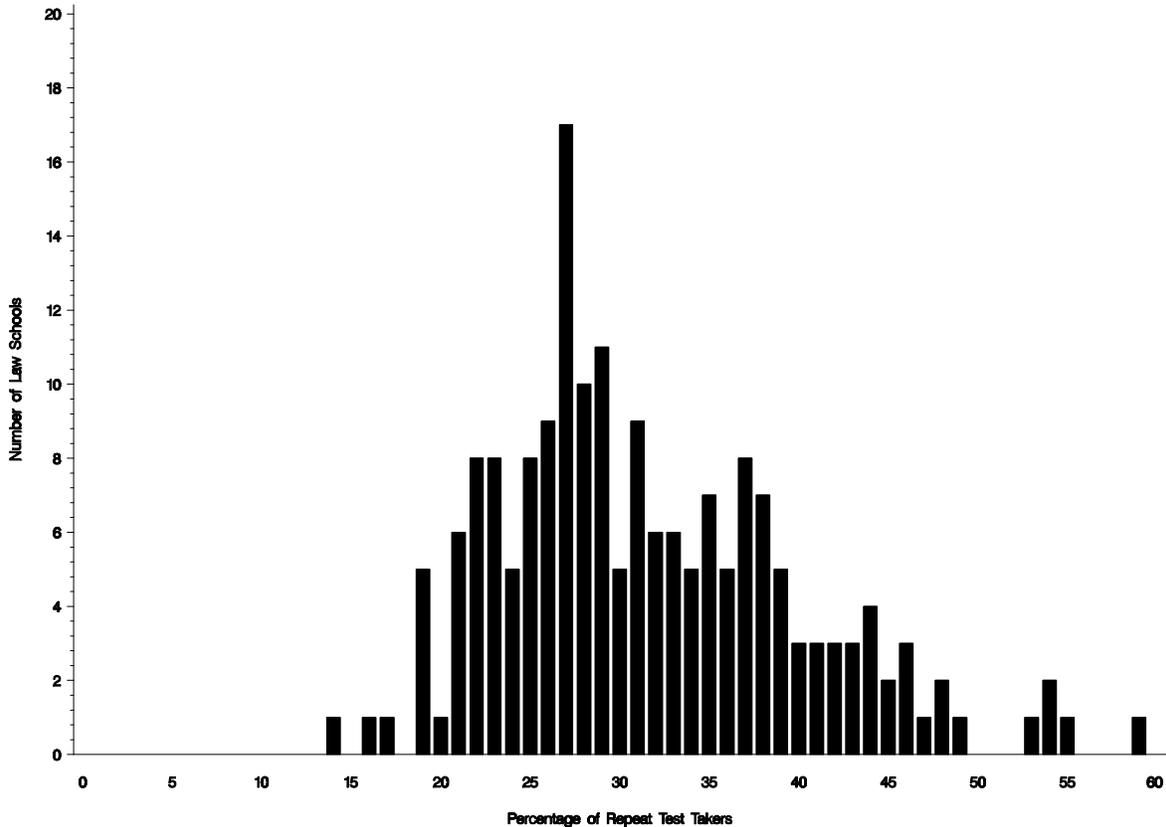

FIGURE 1. *Distribution of percentage of repeat test takers at the law schools included in this study*

Figure 2 shows the distribution of law school LSAT means for one-time test takers, and Figures 3–6 show the distributions of law school means for the most recent, initial, highest, and average test scores of repeat test takers, respectively. In calculating the data presented in these figures, the mean LSAT score was calculated separately for the one-time test takers and the repeat test takers at each school. The distributions demonstrate that repeat test takers tend to be a lower-scoring group than the one-time test takers. In general, one-time test takers tend to earn higher LSAT scores than repeat test takers regardless of whether the most recent, initial, highest, or average score is considered for the repeat test takers. The range of mean LSAT scores across schools for the combined group of one-time and repeat test takers is fairly substantial, varying from a low mean of 135.4 to a high mean of 170.3.
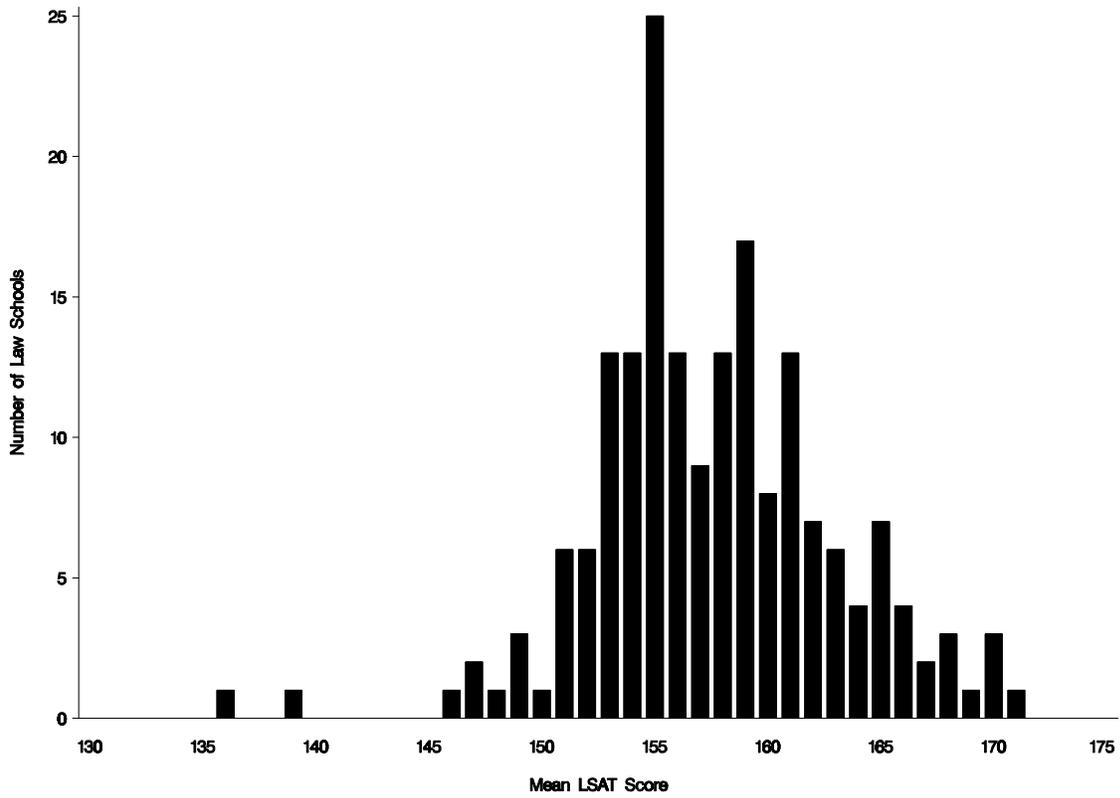
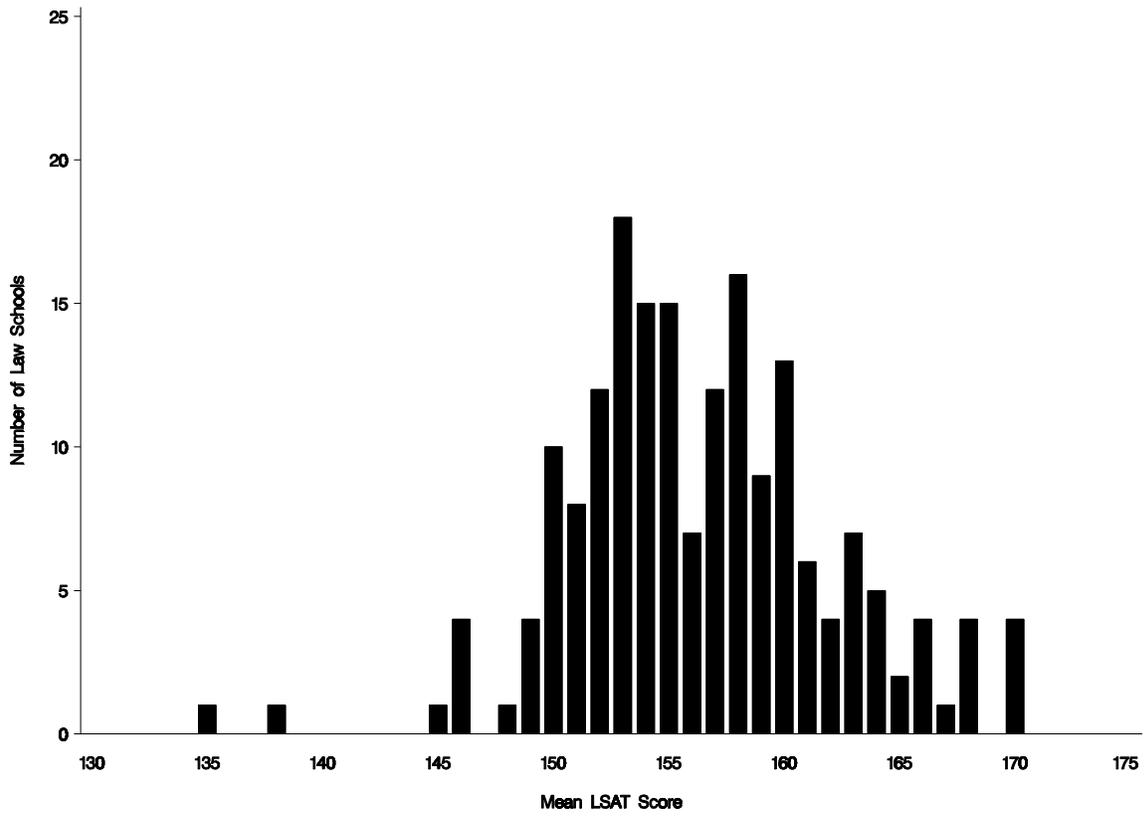FIGURE 2. *Distribution of mean LSAT scores for one-time test takers*

FIGURE 3. *Distribution of mean LSAT scores for repeat test takers based on the most recent LSAT score*
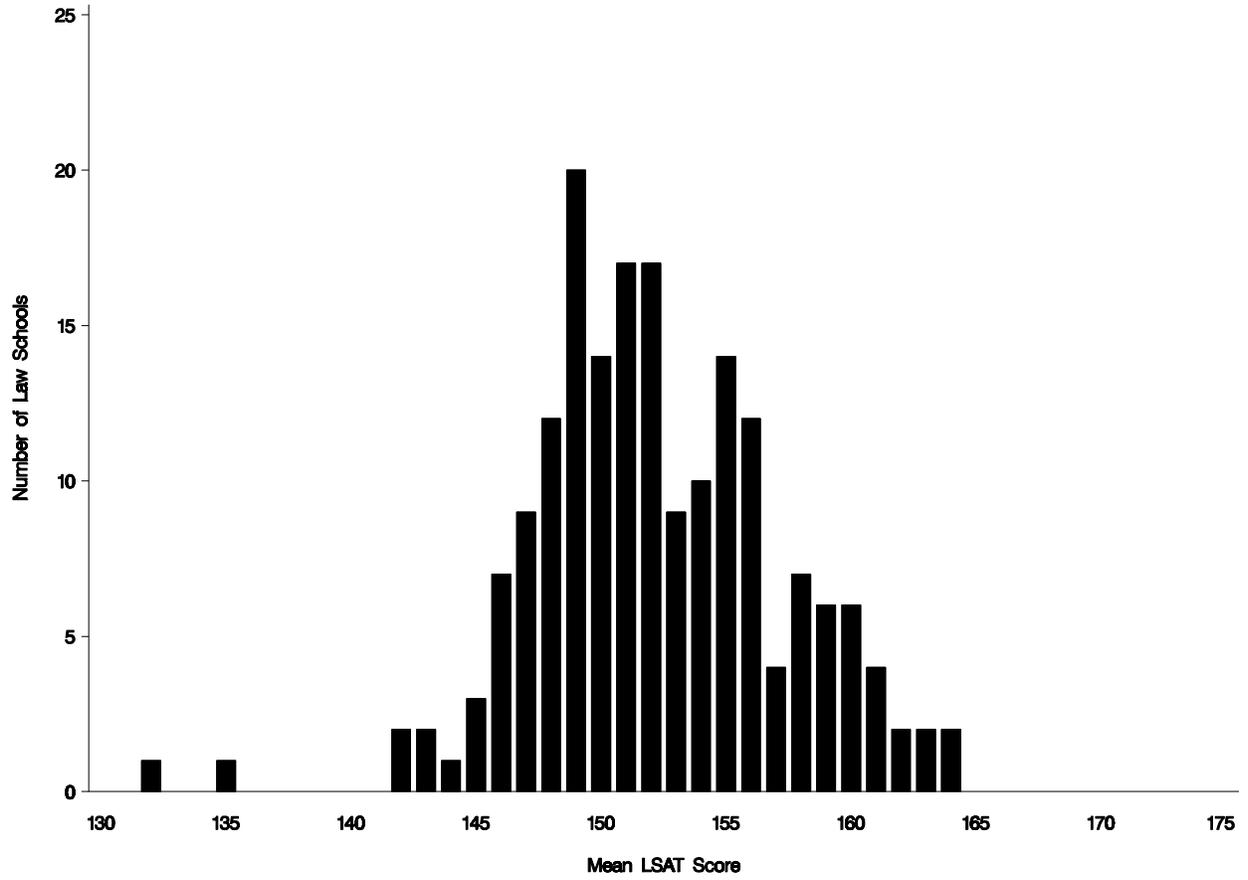
FIGURE 4. *Distribution of mean LSAT scores for repeat test takers based on the initial LSAT score*
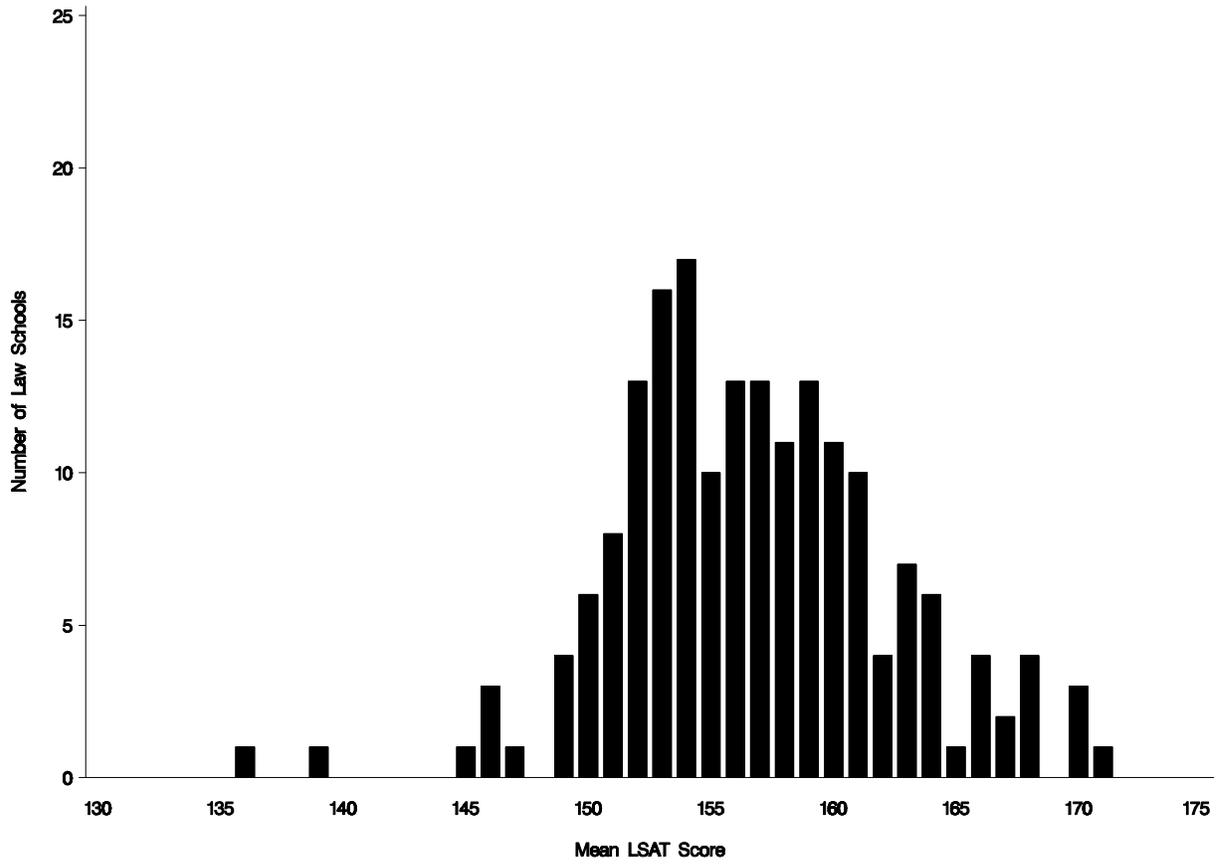
FIGURE 5. *Distribution of mean LSAT scores for repeat test takers based on the highest LSAT score*
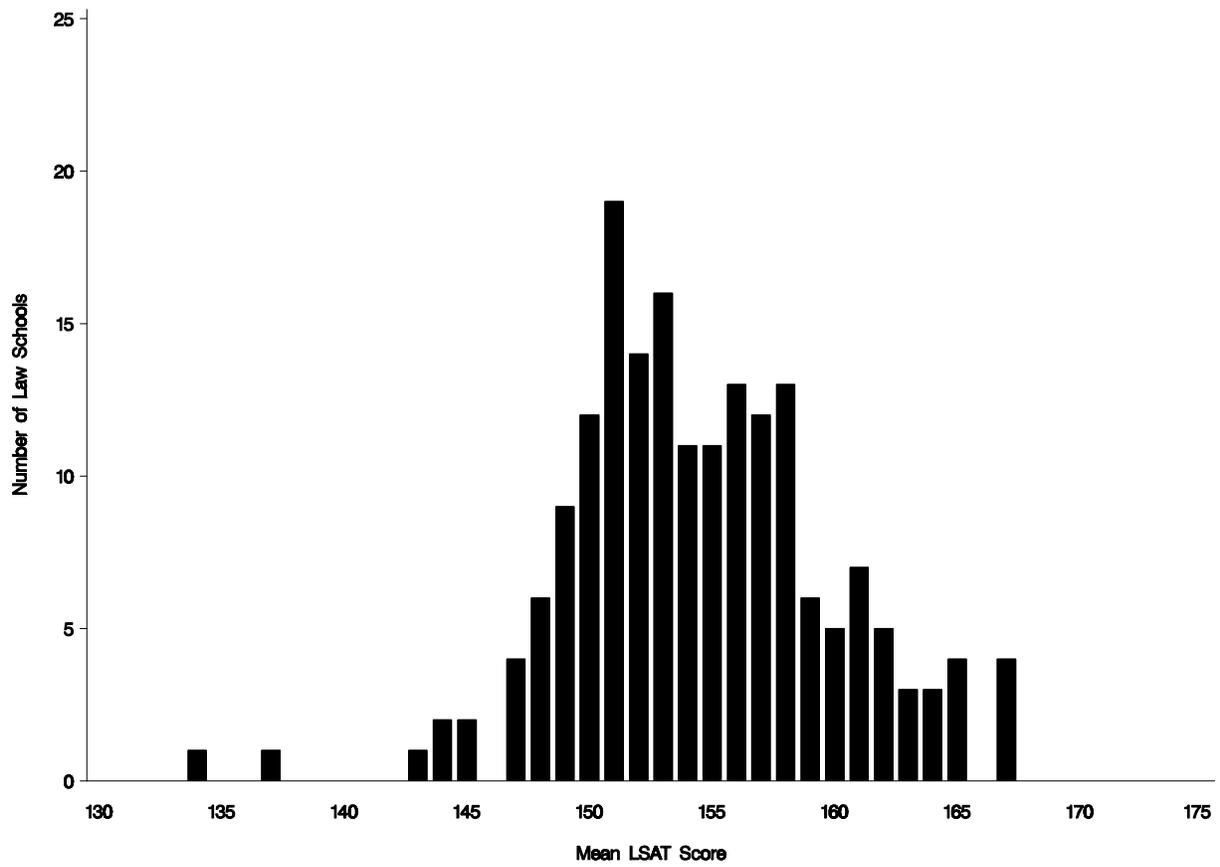
FIGURE 6. *Distribution of mean LSAT scores for repeat test takers based on the average LSAT score*

The pooled student-level means and standard deviations are shown in Table 2. Once again, the average score is higher for the one-time test takers than for any score reported for the repeat test takers. As expected, the smallest difference is found between the one-time test takers' mean and the mean for the highest reported score for the repeat test takers.

TABLE 2
Means and standard deviations of LSAT scores for one-time and repeat test takers

	Mean	SD
Repeat test takers: most recent	156.3	7.4
Repeat test takers: initial	152.2	7.0
Repeat test takers: highest	156.7	7.1
Repeat test takers: average	154.4	6.9
One-time test takers' score	158.8	7.0

It is worth noting that repeat test takers are a self-selected group who, for the most part, choose to repeat the test because they believe the initial score reflects an ability lower than their true ability. Since 2006, law schools have been increasingly choosing to consider a candidate's highest LSAT score instead of their average LSAT score, thus creating incentive for an individual to repeat the LSAT.

Despite the fact that repeat test takers, on average, increase their LSAT performance, even their increased scores tend to be lower than those earned by one-time test takers at their law school. Figures 7–10 show the differences between each school's mean score earned by one-time test takers and the mean score earned by repeat test takers. In general, the comparisons show that within each law school, regardless of the score reported for the repeat test takers, the one-time test takers have higher LSAT mean scores. The magnitude of the difference varies among individual schools, but only 19 schools showed a mean for repeat test takers that exceeded the one-time test takers' mean score (19 when the highest score was reported, and 5 of those same 19 schools when the most recent score was reported).
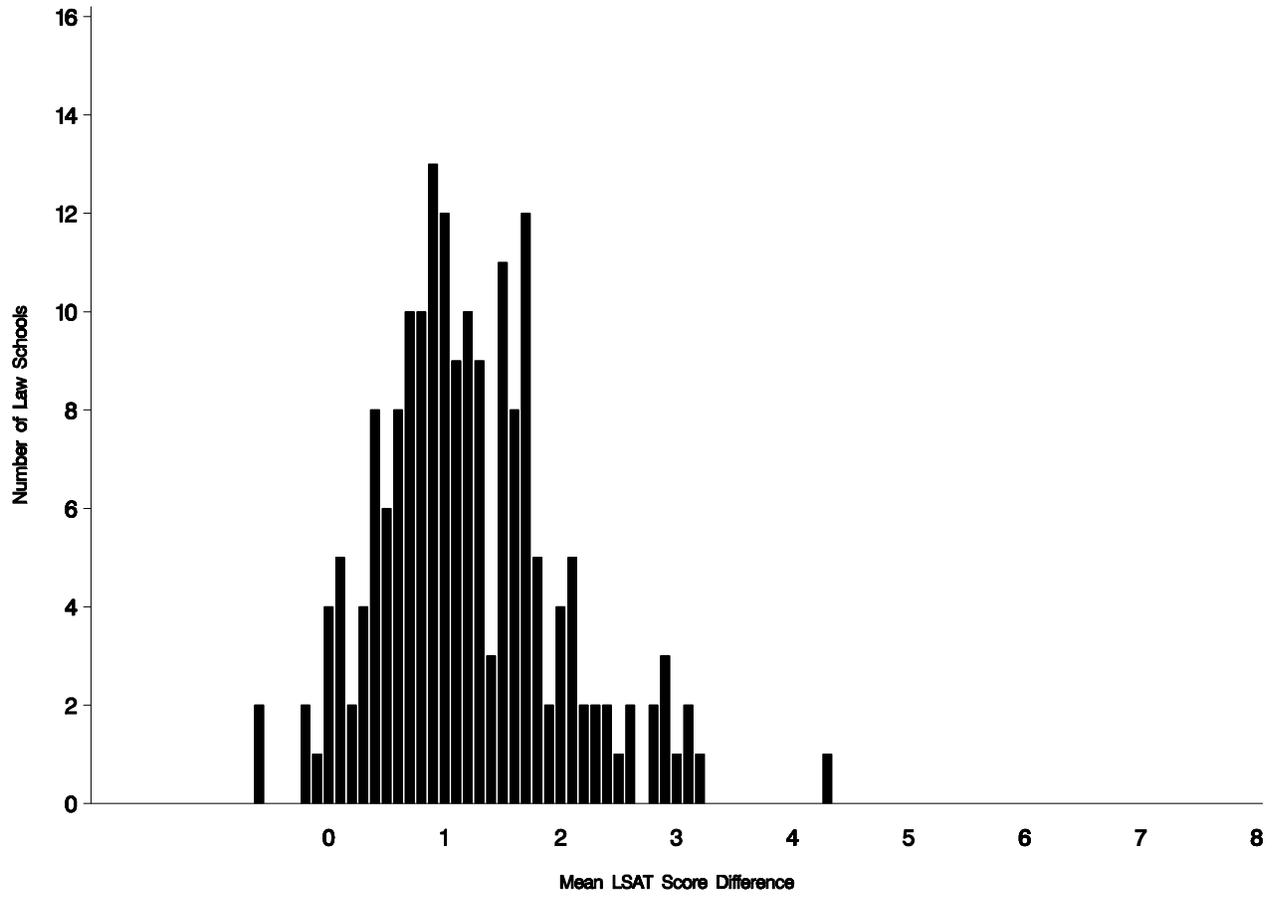
FIGURE 7. *Distribution of LSAT score differences (LSAT means for one-time test takers minus LSAT means for repeat test takers using the most recent score)*
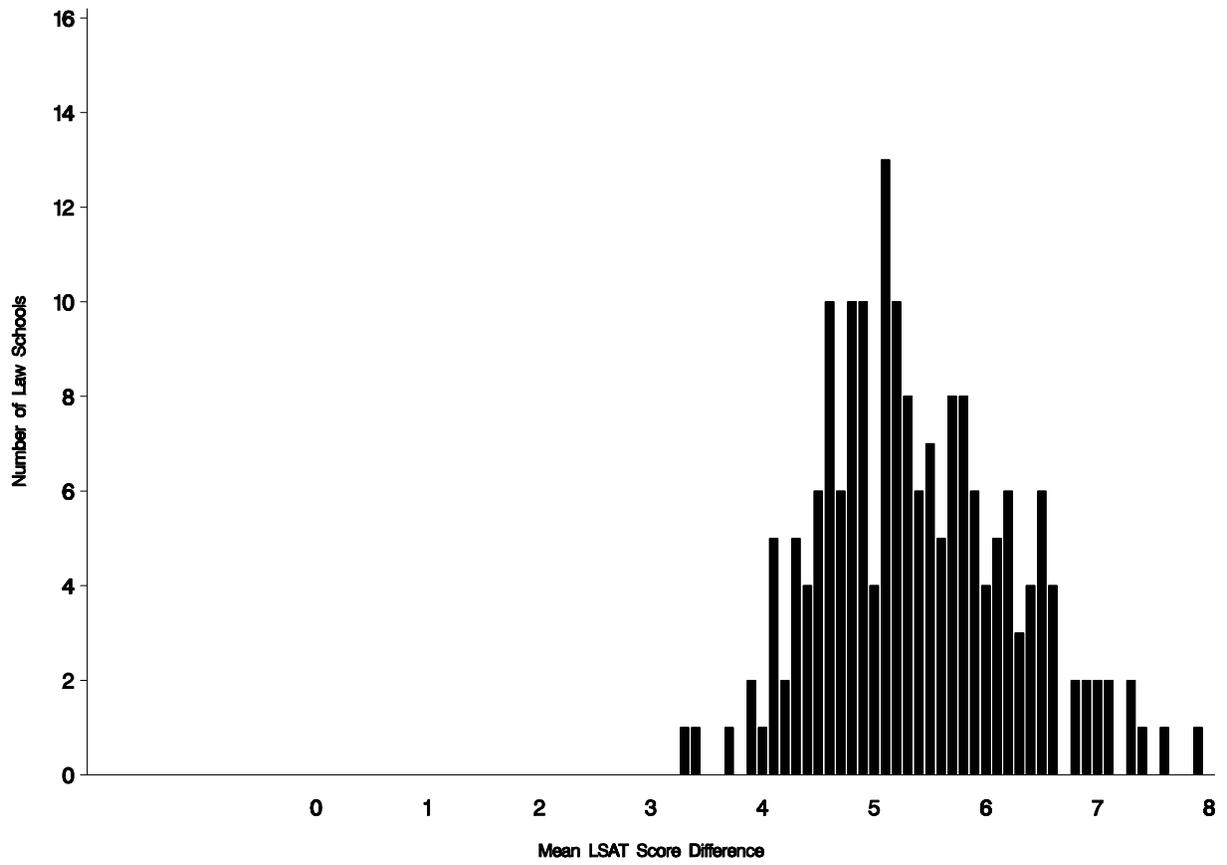
FIGURE 8. *Distribution of LSAT score differences (LSAT means for one-time test takers minus LSAT means for repeat test takers using the initial score)*
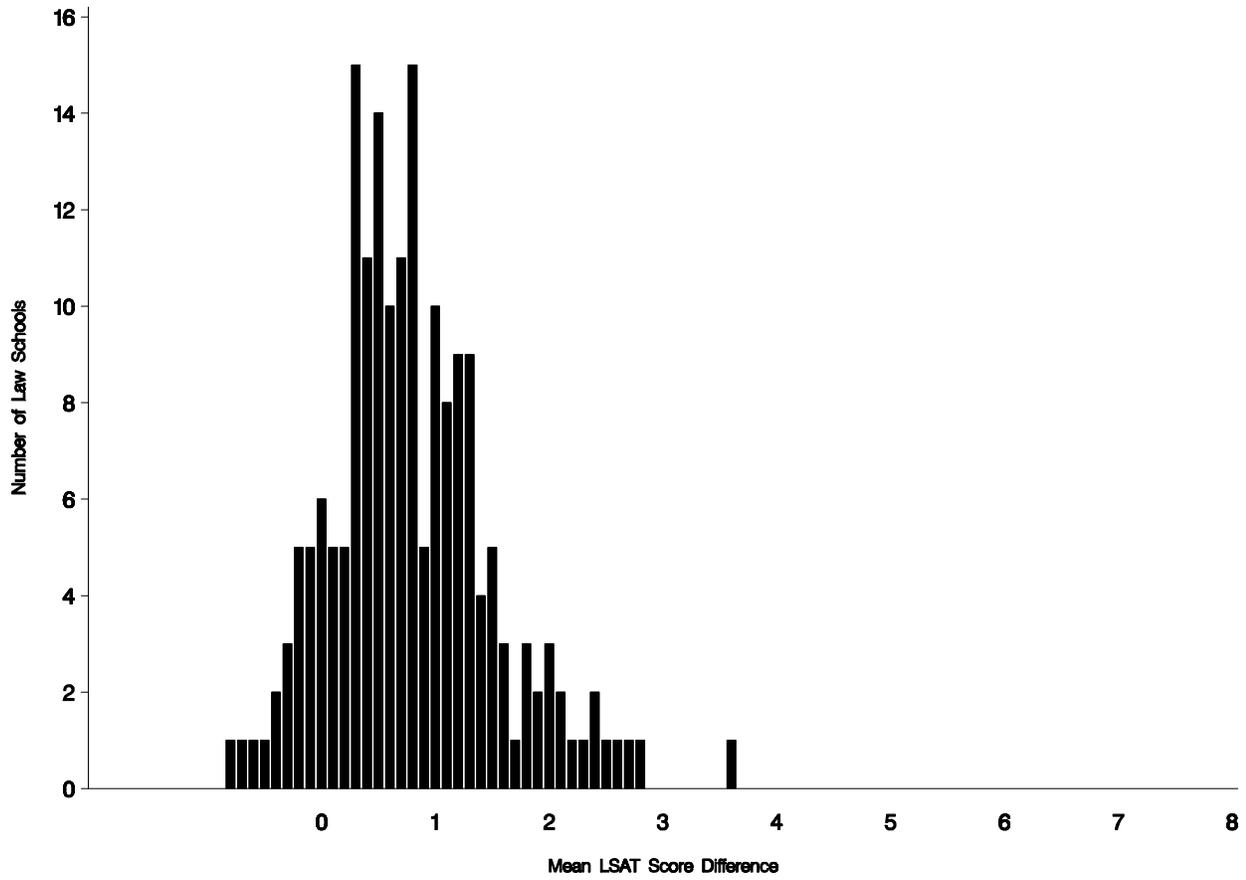
FIGURE 9. *Distribution of LSAT scores differences (LSAT means for one-time test takers minus LSAT means for repeat test takers using the highest score)*
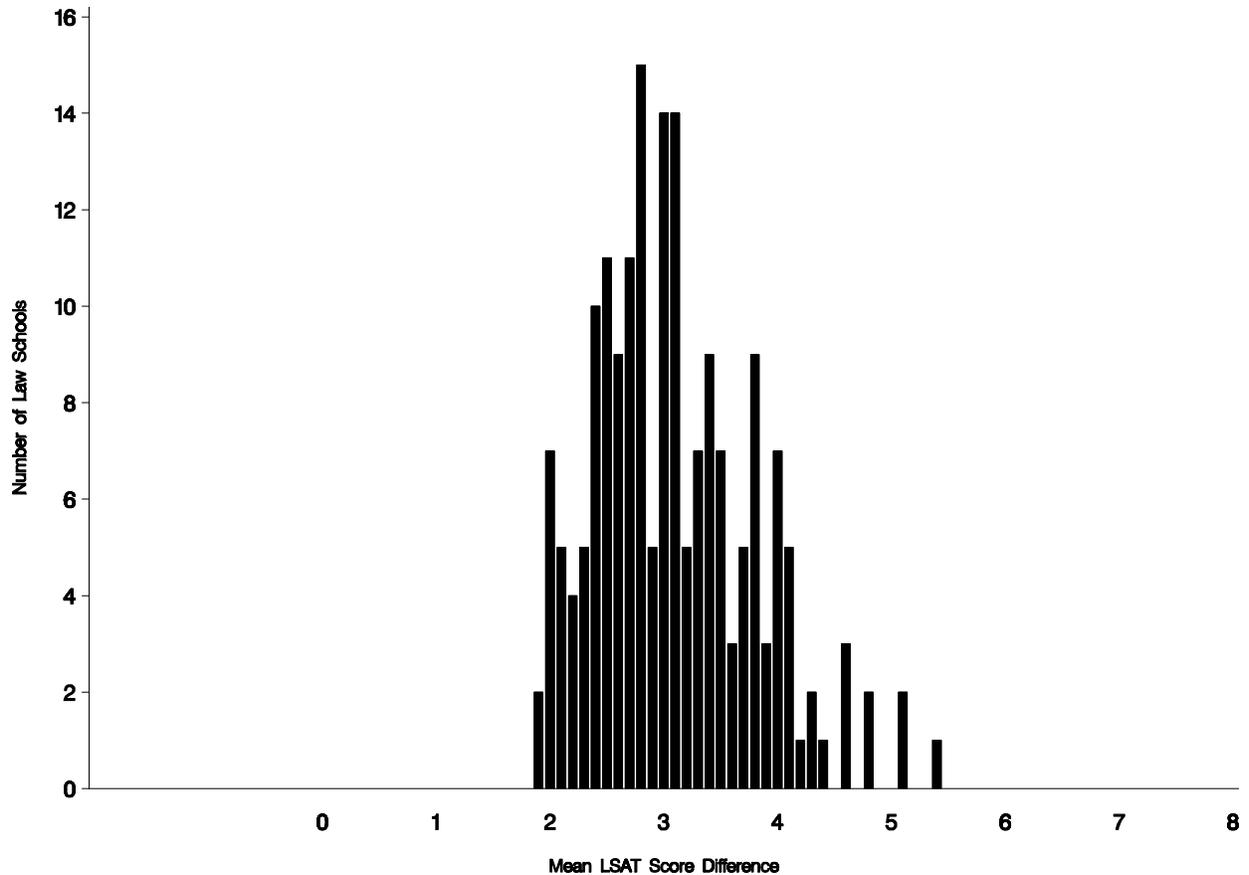
FIGURE 10. *Distribution of LSAT score differences (LSAT means for one-time test takers minus LSAT means for repeat test takers using the average score)*

The mean UGPA is similar for the two groups. Figure 11 compares the average UGPA for one-time test takers with that for repeat test takers at each school. (UGPAs are expressed on a scale from 0.00 to 4.33.) The distribution shows the UGPA school mean for one-time test takers minus the UGPA school mean for repeat test takers. While UGPA means for one-time test takers exceed those for repeat test takers at the majority of schools, these differences are very small. The maximum difference is only 0.17 on the UGPA scale. The overall mean and standard deviation of UGPA for one-time and repeat test takers is also shown in Figure 11. The one-time test takers have an average UGPA of 3.42, and the repeat test takers have an average UGPA of 3.34. The two groups sampled have comparable UGPA standard deviations (0.4). The mean UGPA for one-time test takers is one fifth of a standard deviation higher than the mean UGPA for repeat test takers.
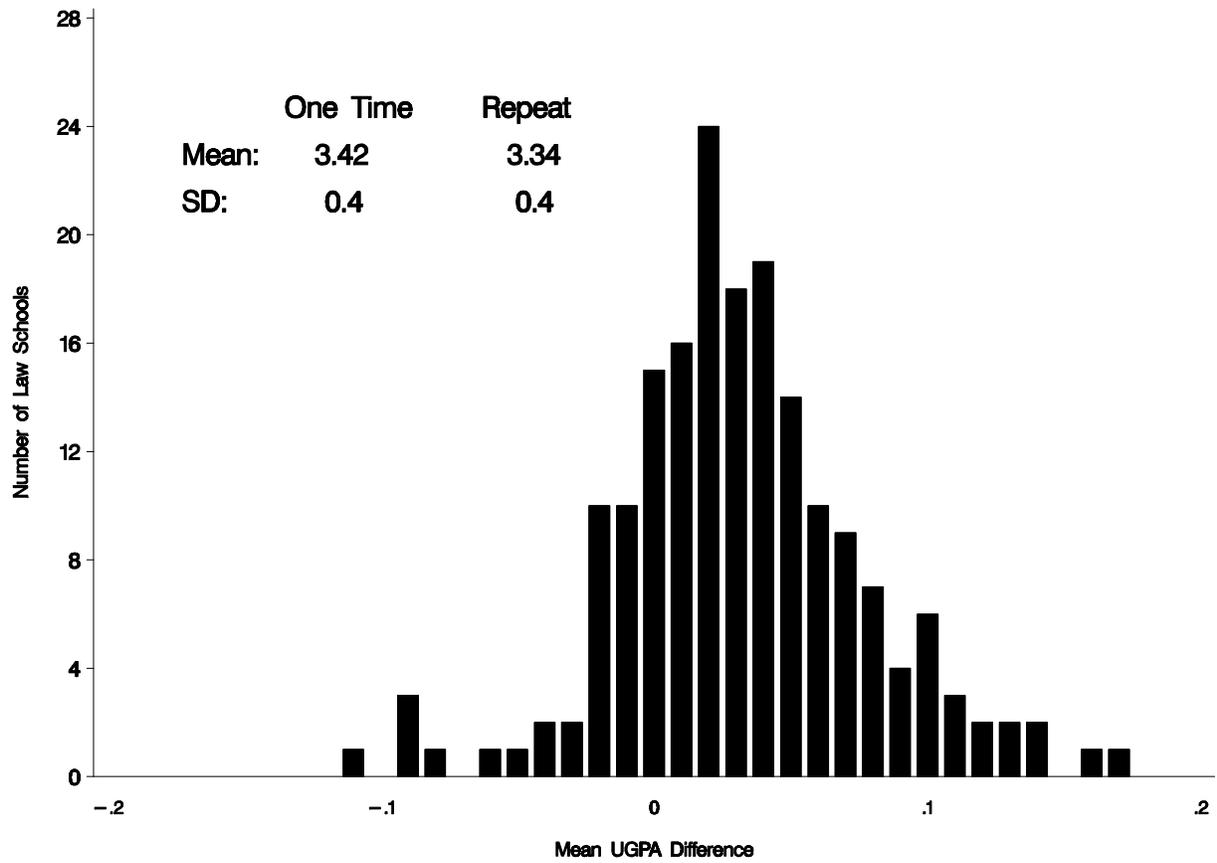
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FIGURE 11. *Distribution of UGPA differences (UGPA means for one-time test takers minus UGPA means for repeat test takers)*

Figure 12 shows the FYA school mean for one-time test takers minus the FYA school mean for repeat test takers. The largest difference in the repeat test takers' favor is 1.4 grade points. (Recall that FYAs have been transformed to a scale with a mean of 50 and standard deviation of 10.) Most of the distribution's area is above 0, indicating that the one-time test takers on average earned slightly higher FYAs than their classmates who took the LSAT more than once. In only 3 of the 184 schools examined in this study does the mean FYA for repeat test takers exceed the mean for one-time test takers. The overall FYA means are 50.65 for one-time test takers and 48.58 for repeat test takers. The standard deviation for both groups is about 10 grade points. The mean FYA for one-time test takers is about one fifth of a standard deviation higher than the mean FYA for repeat test takers. These results are not fully consistent with those reported by Wightman (1990) but closely resemble the results observed in the Dalessandro and McLeod (1998), Stilwell et al. (2002), and Thornton et al. (2006) studies. The repeat test takers in Wightman's study achieved lower grades in law school than did the one-time test takers, but the two groups earned comparable UGPAs.
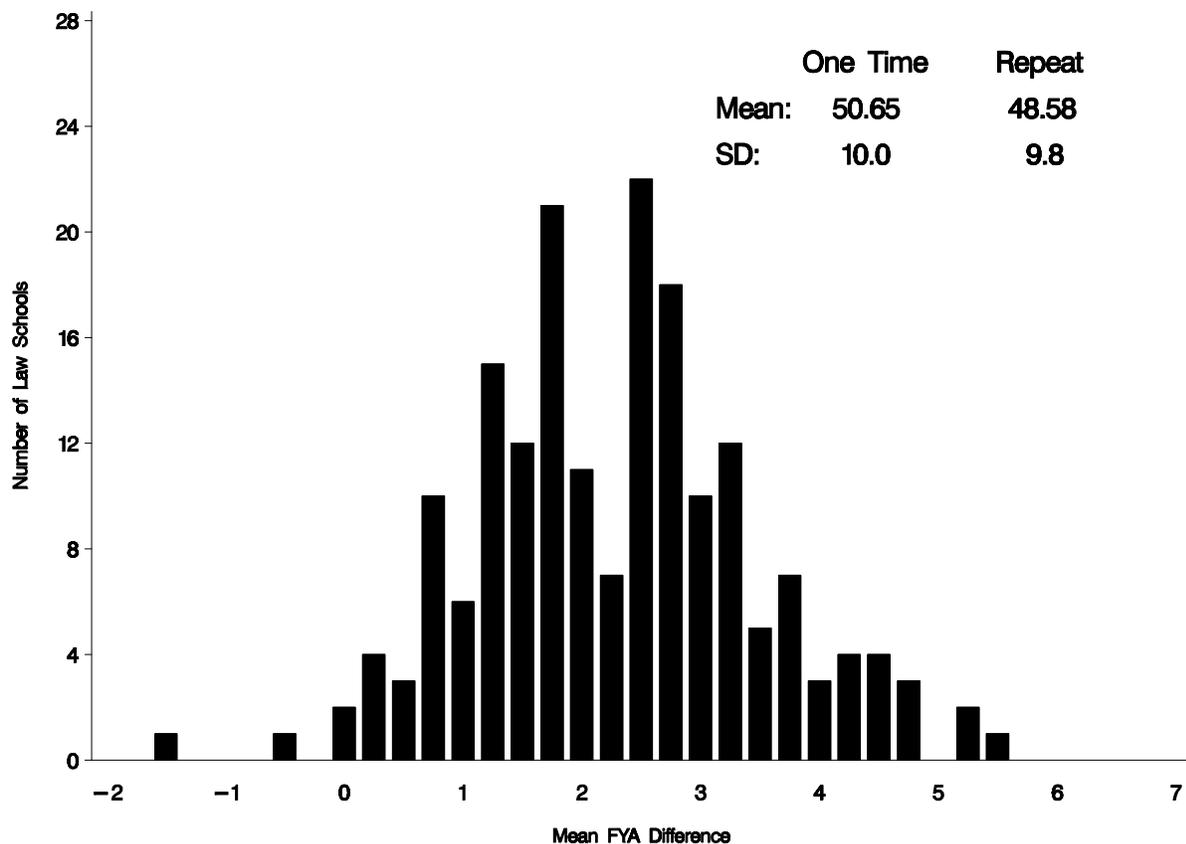

FIGURE 12. *Distribution of FYA differences (FYA means for one-time test takers minus FYA means for repeat test takers)*

Predicting First-Year Averages

A primary research question addressed by this study was whether or not LSAT score, UGPA, or the combination of these two predictor variables differentially predicted FYA for law school students who had been one-time test takers compared with those who had been repeat test takers. Three separate predictor combinations were analyzed for these data: LSAT score alone, UGPA alone, and LSAT score and UGPA combined. The LSAT score (or combination of scores) used for the repeat test takers was varied for each expression that used LSAT score as a predictor, resulting in nine regressions. Each prediction equation was derived using the total group data within each law school (repeat test takers and one-time test takers combined) and then applied to the groups separately.

Comparisons between the predicted and actual FYA were made for repeat test takers and one-time test takers based on each regression equation. The calculations were made within each school, with FYAs converted to a scale where the mean for each school was set to 50 and the standard deviation to 10 for comparison purposes. The conversion was made to preserve the confidentiality of the data and to allow comparisons across law schools.

Figures 13–21 show the differences between predicted and actual FYA means for one-time and repeat test takers using the nine regression equations. Note that a negative value indicates that the regression equation underpredicted the mean performance of a subgroup in a law school, while a positive value indicates that the regression equation overpredicted the mean performance of a subgroup in a law school.

Figures 13–16 display the distributions of differences between predicted and actual FYA means for one-time and repeat test takers using only LSAT score as the predictor variable. The regression equations using the most recent LSAT score and the highest LSAT score for the repeat test takers produced the distributions displayed in Figures 13 and 15, respectively. These figures reveal that using the most recent LSAT score and the highest LSAT score results in overprediction of FYA. The one-time test takers' performance is slightly underpredicted at some law schools by the same regression equation. When the initial LSAT score is used for the repeat test takers, the opposite pattern appears, as shown by the data presented in Figure 14. The regression equation based on these data from the repeat test takers and one-time test takers combined tends to underpredict the first-year law school performance for the repeat test takers (57% of the 184 law schools) and slightly overpredict the one-time test takers' performance (34% of the 184 schools). To find the most accurate prediction using LSAT score alone, the average LSAT score for the repeat test takers (58% of the 184 schools) is used (Figure 16).
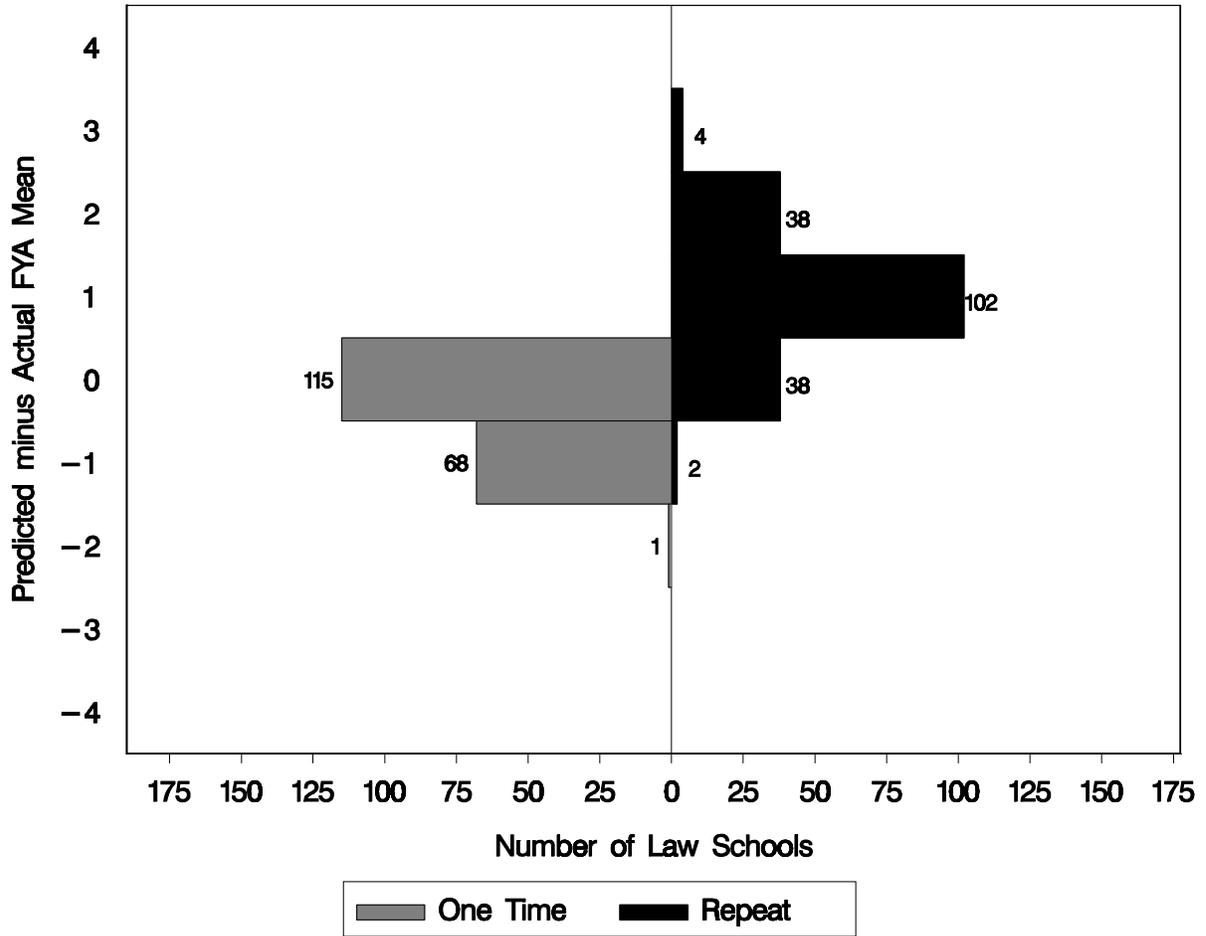
FIGURE 13. *Frequency distributions of differences between predicted and actual FYA means for one-time and repeat test takers at participating law schools using LSAT score as the predictor variable (using the most recent score for the repeat test takers)*
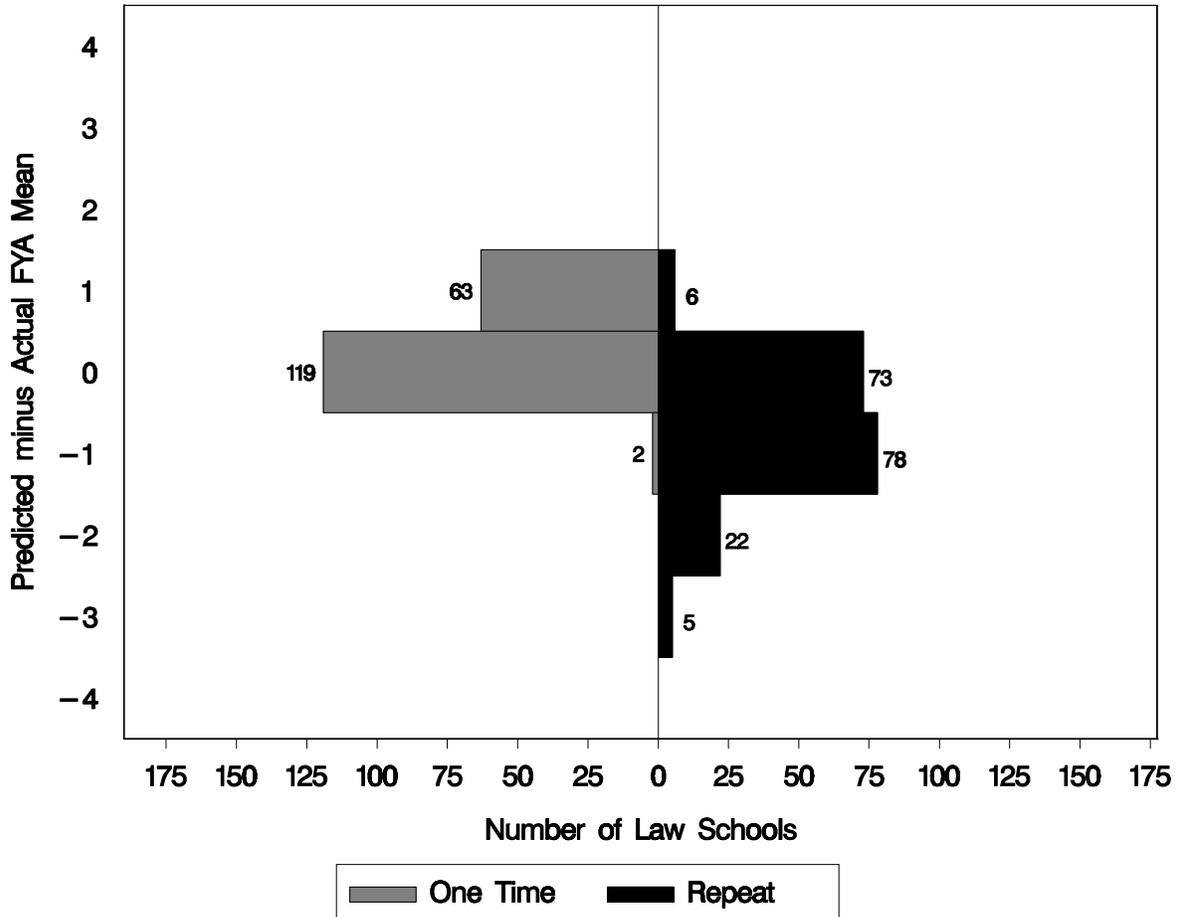
FIGURE 14. *Frequency distributions of differences between predicted and actual FYA means for one-time and repeat test takers at participating law schools using LSAT score as the predictor variable (using the initial score for the repeat test takers)*
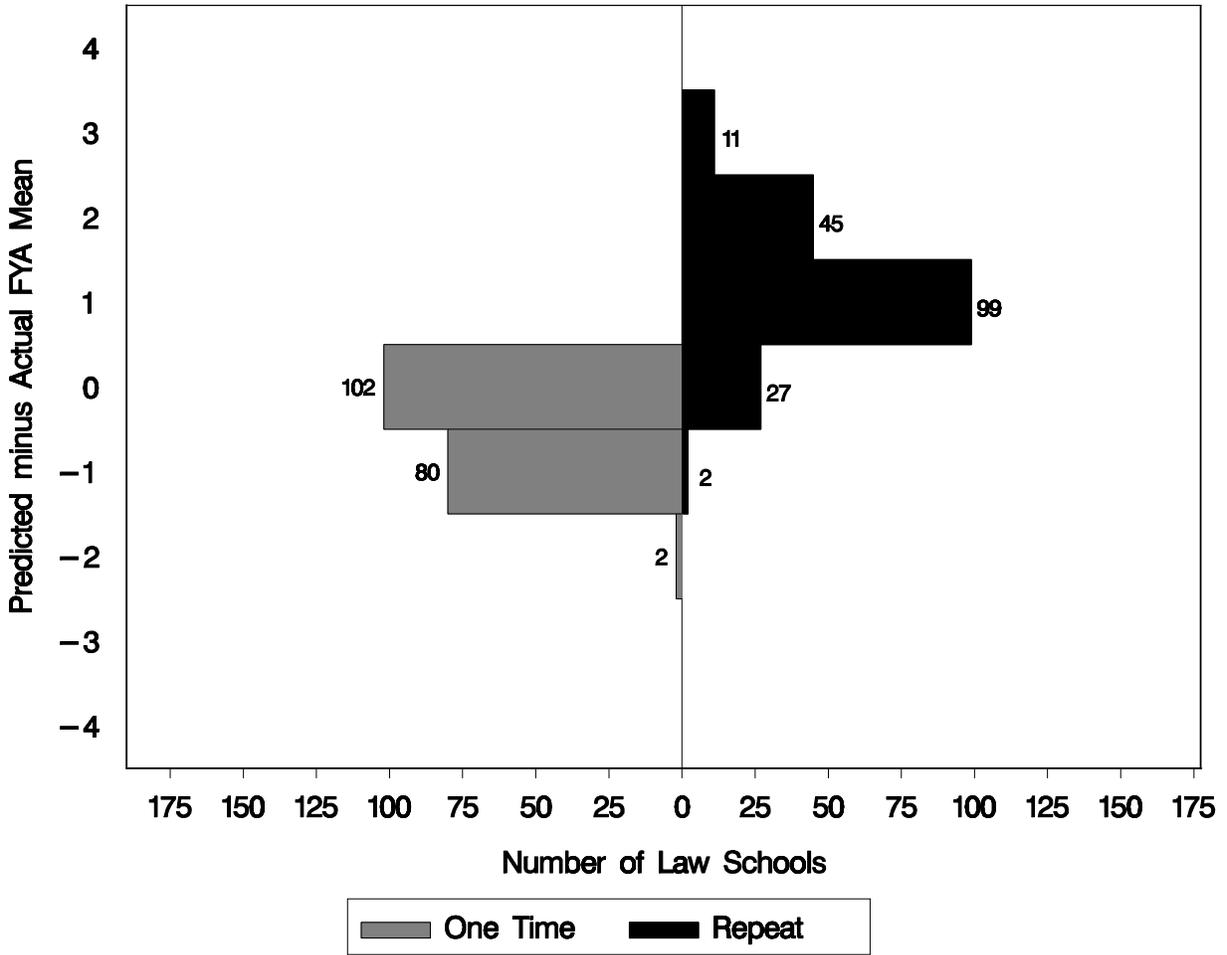
FIGURE 15. *Frequency distributions of differences between predicted and actual FYA means for one-time and repeat test takers at participating law schools using LSAT score as the predictor variable (using the highest score for the repeat test takers)*
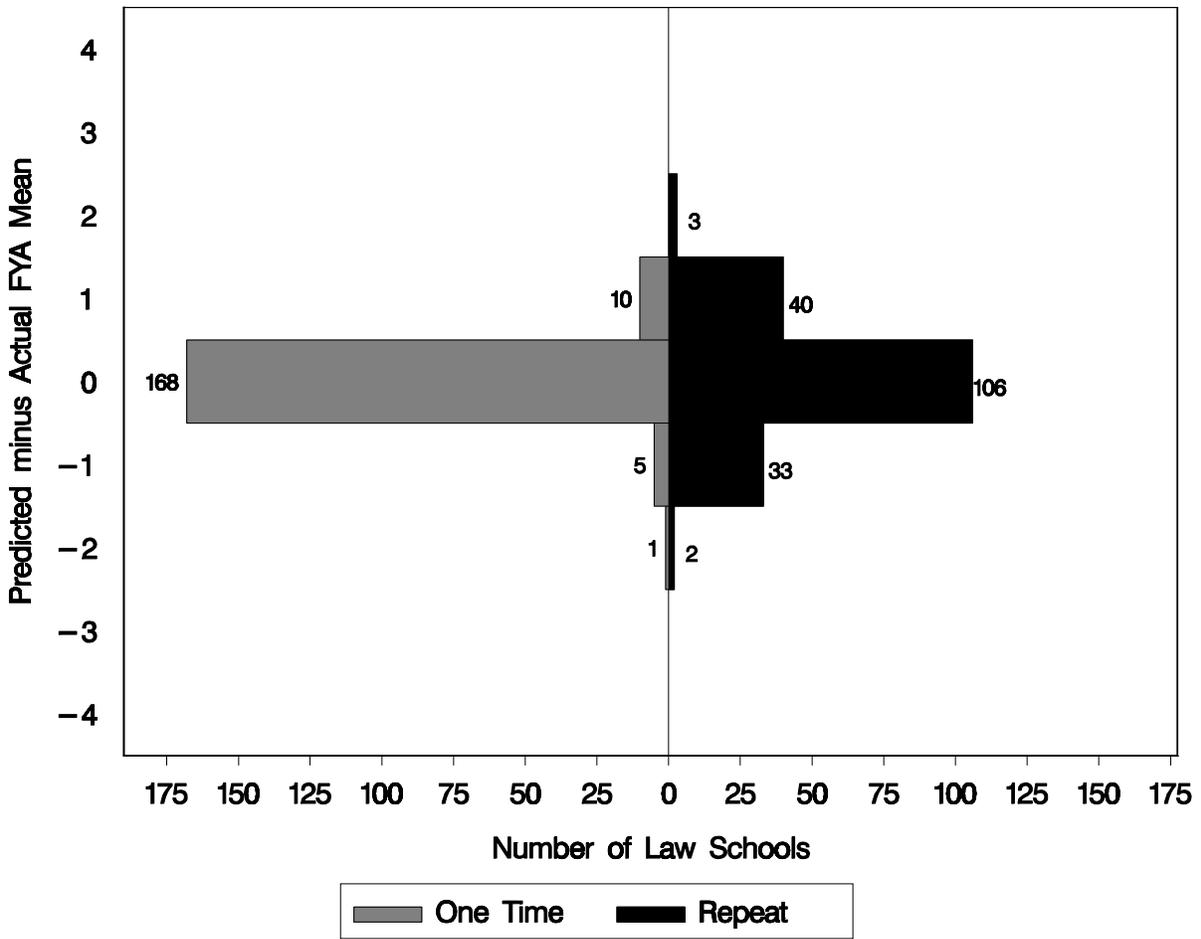
FIGURE 16. *Frequency distributions of differences between predicted and actual FYA means for one-time and repeat test takers at participating law schools using LSAT score as the predictor variable (using the average score for the repeat test takers)*

Figure 17 contains the differences between predicted and actual FYA means based on a regression equation using only UGPA. The distributions reveal that UGPA alone overpredicts the FYA of repeat test takers (91% of the 184 schools) while either predicting FYA accurately (43%) or underpredicting FYA (57%) for one-time test takers.
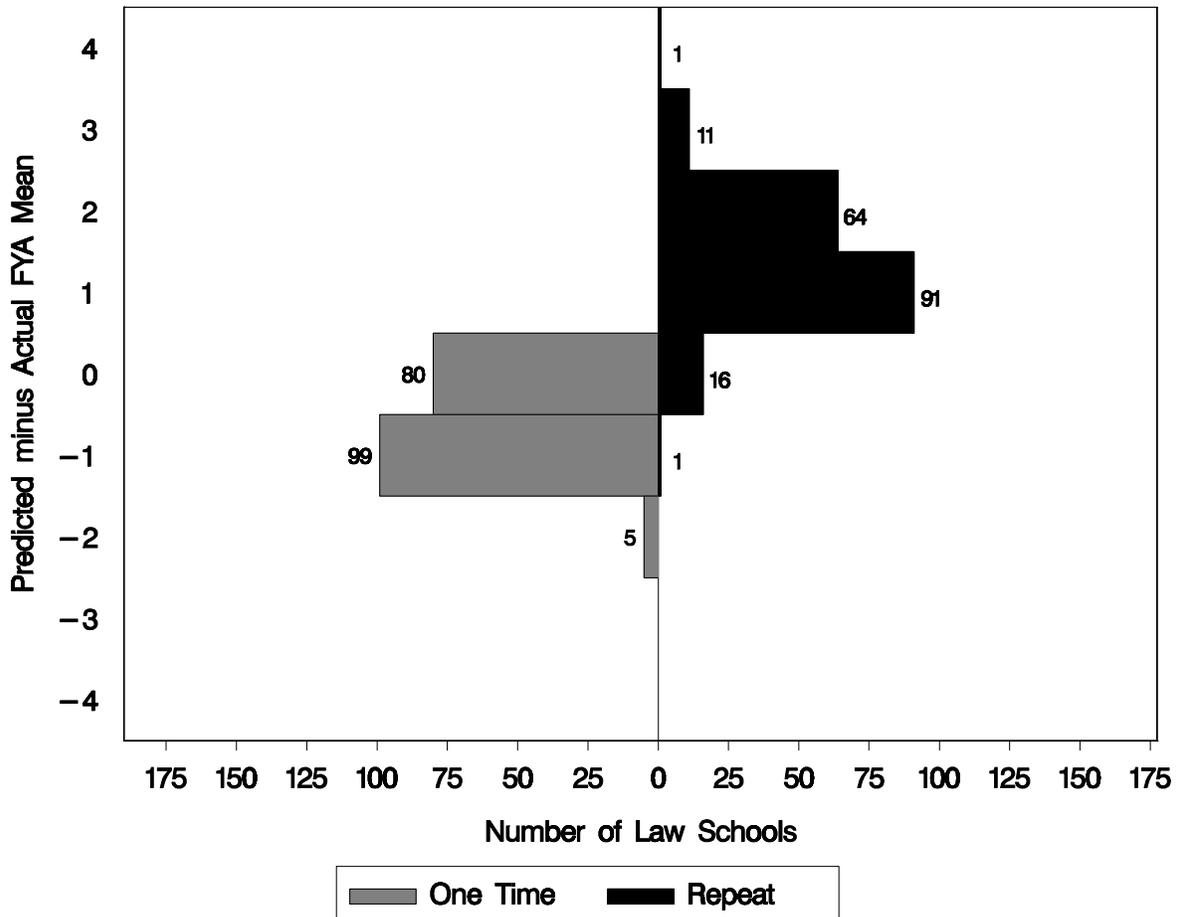

FIGURE 17. *Frequency distributions of differences between predicted and actual FYA means for one-time and repeat test takers at participating law schools using UGPA as the predictor variable*

Figures 18–21 show the distribution of differences when the LSAT score is combined with UGPA for one-time and repeat test takers. The results for the regression equation based on the most recent score and the highest score combined with UGPA (Figures 18 and 20, respectively) reveal a pattern similar to the results observed for LSAT score alone. In both cases, the first-year performance is overpredicted for the repeat test takers (68% and 83% of the 184 schools; Figures 18 and 20, respectively). When the initial LSAT score combined with UGPA is used for the repeat test takers in predicting FYA, the repeat test takers' performance is underpredicted (78% of the 184 schools), as shown by the data presented in Figure 19. Again, this is similar to what was observed for the analyses of LSAT score alone. When combining LSAT score with UGPA, Figure 21 reveals that the most accurate prediction for repeat test takers (60% of the 184 schools) is achieved when the average LSAT score is used in the equation.

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This model results in a more accurate prediction of FYA than any of the other models combining LSAT score and UGPA for both one-time and repeat test takers. It also results in a more accurate prediction than any of the LSAT-alone models or the UGPA-alone model.
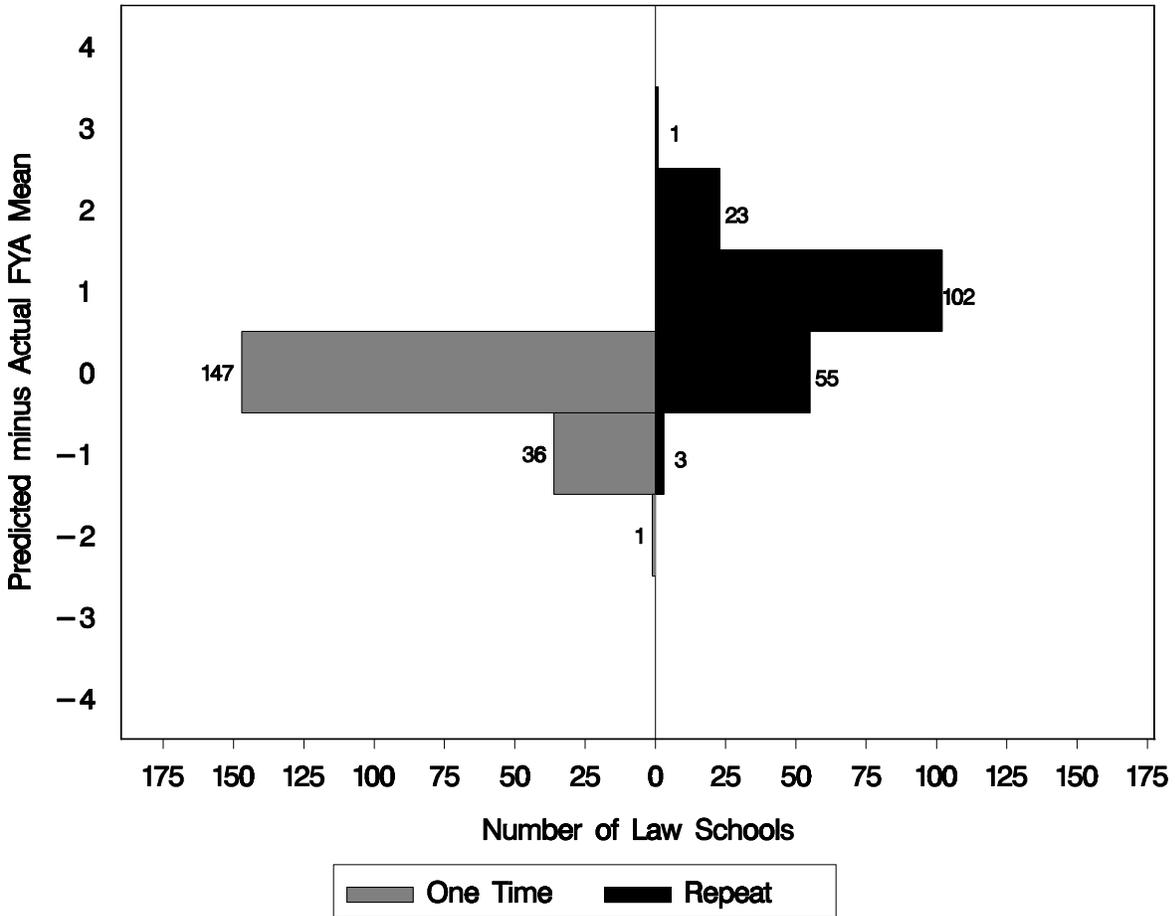

FIGURE 18. *Frequency distributions of differences between predicted and actual FYA means for one-time and repeat test takers at participating law schools using LSAT score and UGPA as the predictor variables (using the most recent LSAT score for the repeat test takers)*
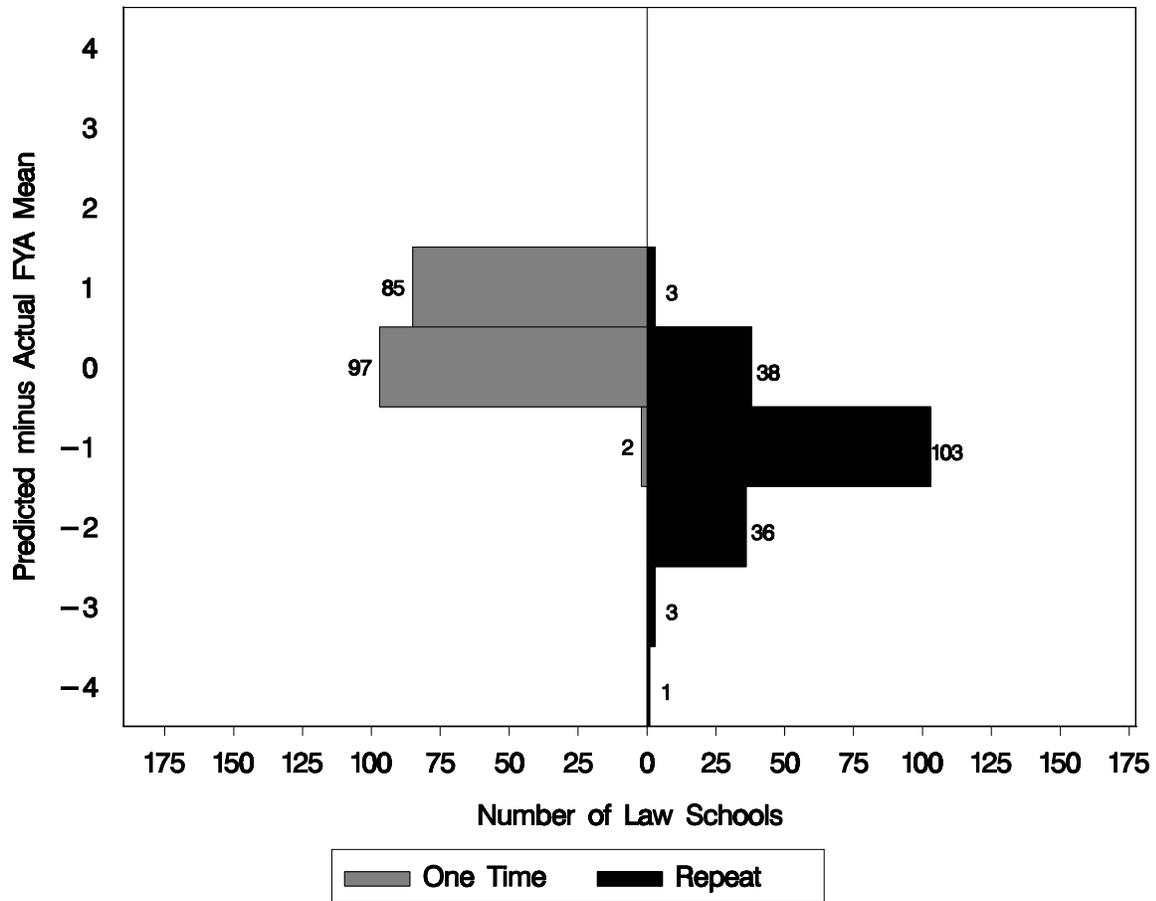
FIGURE 19. *Frequency distributions of differences between predicted and actual FYA means for one-time and repeat test takers at participating law schools using LSAT score and UGPA as the predictor variables (using the initial LSAT score for the repeat test takers)*

FIGURE 20. *Frequency distributions of differences between predicted and actual FYA means for one-time and repeat test takers at participating law schools using LSAT score and UGPA as the predictor variables (using the highest LSAT score for the repeat test takers)*
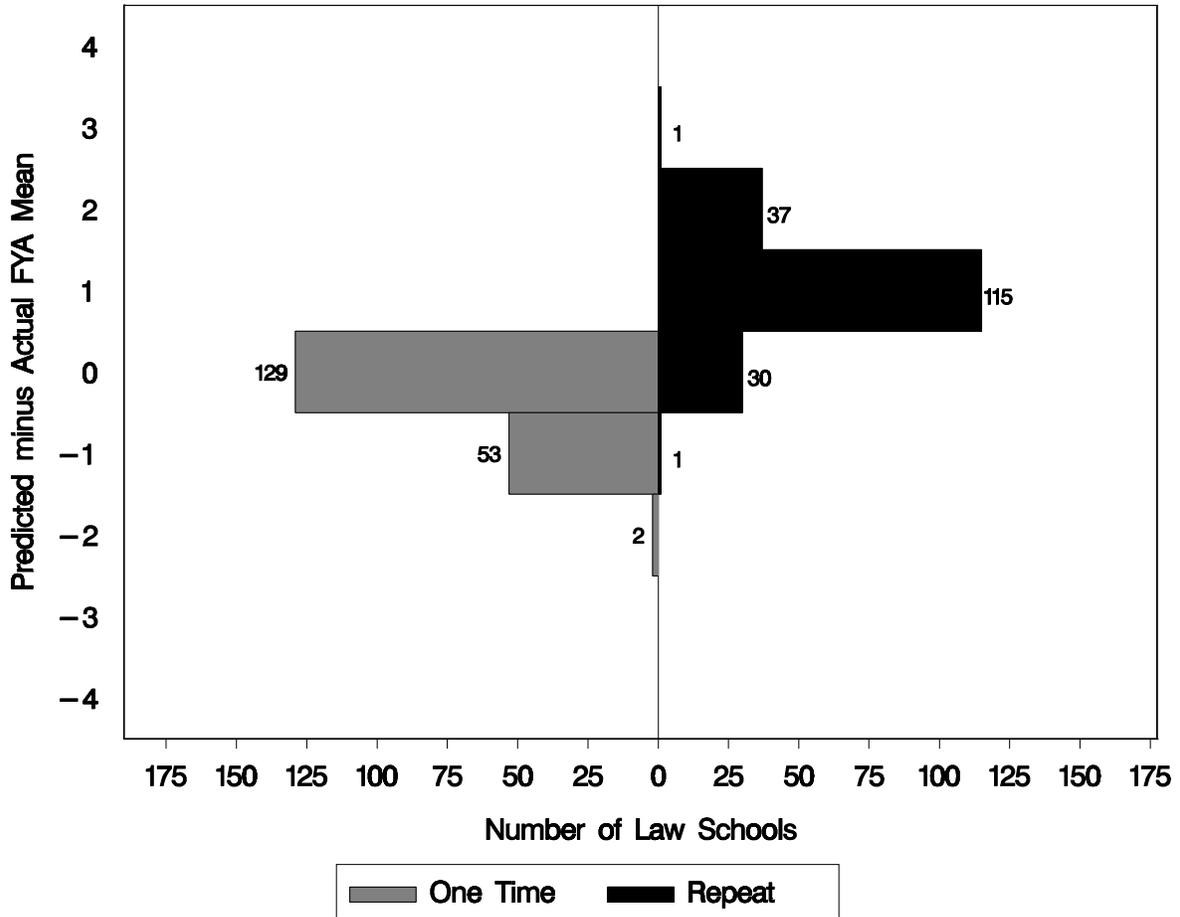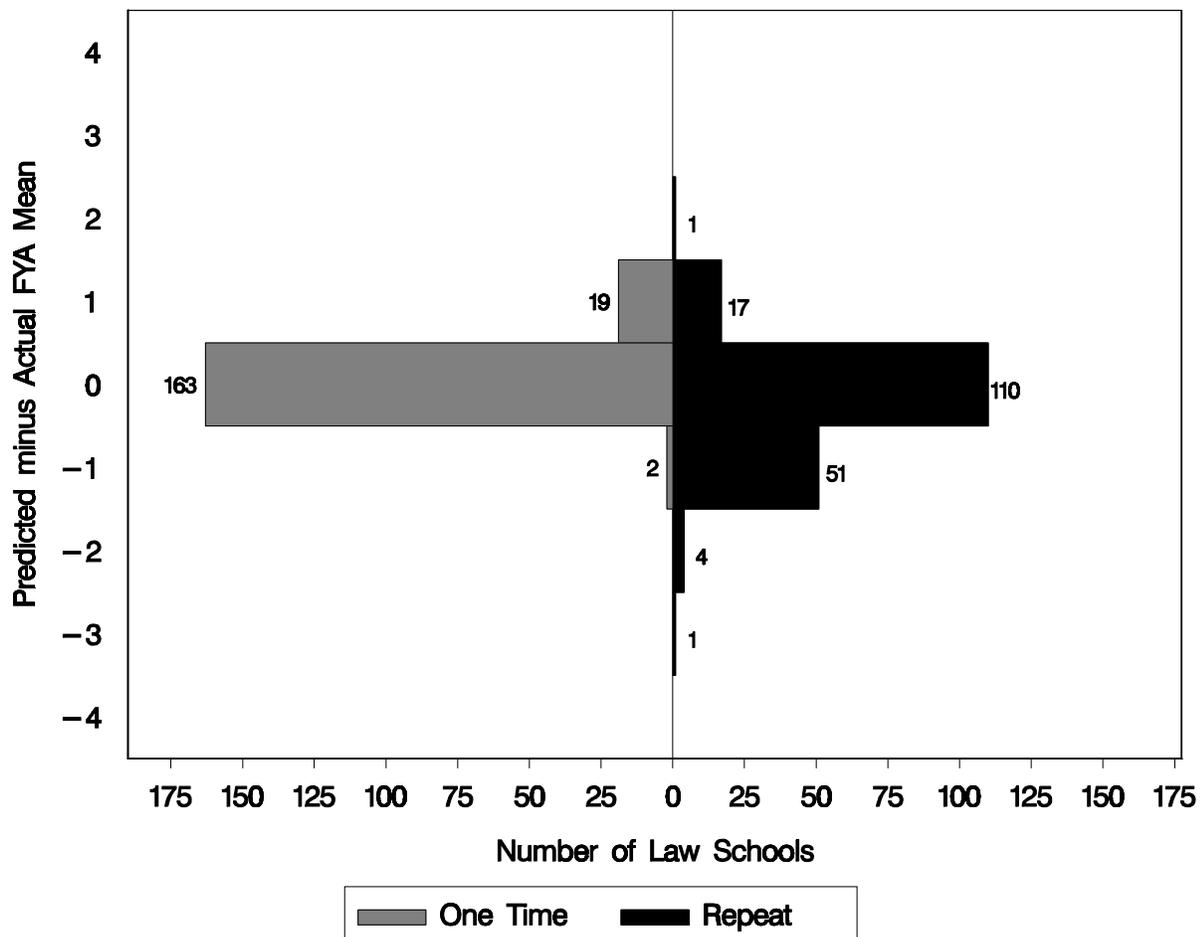
FIGURE 21. *Frequency distributions of differences between predicted and actual FYA means for one-time and repeat test takers at participating law schools using LSAT score and UGPA as the predictor variables (using the average LSAT score for the repeat test takers)*

Summary and Discussion

This study analyzed data from 184 law schools, each of which enrolled 50 or more first-year students who took the LSAT on more than one occasion. The present study was conducted to determine the most accurate treatment of multiple LSAT scores for a single law school applicant from the standpoint of predictive validity (i.e., the most accurate prediction of FYA).

Regression equations derived by combining data for both one-time and repeat test takers were used to evaluate differential prediction of law school FYAs when LSAT score alone, UGPA alone, or both LSAT score and UGPA combined were used as predictors. Each of the multiple scores reported for repeat test takers was used in the predictor combinations. The data confirm that using the average LSAT score for the repeat test takers, either alone or in combination with UGPA, produces the best prediction of FYA. This conclusion confirms previous recommendations in the literature.

It should be noted that differential prediction is only one aspect of an overall construct-validity evaluation. Other aspects, such as the strength of the correlation between a predictor and a criterion variable, should also be considered when deciding whether prediction equations are equitable and valid. In addition, score users need to be sensitive to individual circumstances. In particular, if there is valid documentation indicating that a test score does not accurately reflect a test taker's ability (e.g., if he or she was sick during that administration), such information should be taken into consideration.

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