I. INTRODUCTION

Unlike most graduate education programs, law school graduates must pass rigorous state licensing examinations before they may begin to put their education to use. Most of those graduates have invested tens of thousands of dollars in law school tuition, fees and expenses and have foregone income from other employment while spending at least three years of their lives to obtain their law degrees. For a significant minority of those students, their expenditure of time, money and effort will not be rewarded because they will not pass state bar examinations and will not be licensed to practice law.

The first time bar examination passage rate for all states has fallen from 79% in 1996 to 76% in 2005. The overall bar examination passage rate for all state bar examination takers, which includes repeat test takers, has fallen from 70% to 64% during that same period. Over 14,000 new law school graduates failed state bar examinations in
2005 and were unable to enter their chosen profession.\textsuperscript{3} Counting repeat test takers, 28,599 law school graduates failed state bar examinations in 2005 as opposed to 51,958 who passed.\textsuperscript{4}

Enrollment at law schools accredited by the American Bar Association (ABA) has increased from 46,666 in 1963 to 140,298 in 2006 as the number of accredited schools has grown from 135 to 191.\textsuperscript{5} The number of students graduating each year from ABA accredited law schools has risen from just under 10,000 in 1963 to over 42,600 in 2006.\textsuperscript{6} In addition, there has been a rise in the number of non-ABA accredited law schools. California, for example, reports the bar examination passage rates for more than 40 non-ABA accredited law schools whose graduates take the California bar examination.\textsuperscript{7}

Law schools have become big business and a major source of revenue for universities. The average annual tuition, excluding fees, expenses and books, for obtaining a law degree approaches $23,300.00.\textsuperscript{8} The ABA reports that the total cost of attending law school for three years, including tuition, fees, books, housing, transportation and personal expenses could exceed $150,000.00.\textsuperscript{9} The total annual law

\begin{footnotesize}
\begin{enumerate}
\item Id.
\item Id.
\item Id.
\item ABA-LSAC Official Guide to ABA Approved Law Schools, 2007 Edition, Chapter 12, pp 56-65 (2006). Calculated by adding the in-state resident tuition rate of the 191 ABA accredited law schools and dividing by 191. This no doubt under calculates the average tuition charged due to the fact that state sponsored law schools charge higher out-of-state tuition rates to non-resident students. Also, the average does not consider the discount rate or effect of scholarships which are awarded incoming students which may reduce the amount of tuition collected.
\item Id. at 34.
\end{enumerate}
\end{footnotesize}
school tuition generated at all ABA accredited institutions is estimated to exceed
$3,200,000,000.00.\textsuperscript{10}

Law schools are becoming increasingly concerned about their bar examination failure rate. It has been noted that “the bar examination permeates and controls fundamental aspects of legal education at law schools across the country.”\textsuperscript{11} Most law schools have adopted remedial programs for their weaker students in an effort to improve their bar examination passage rate.\textsuperscript{12} Recently, the ABA’s Section of Legal Education and Admission to the Bar has amended its accrediting standards to allow ABA accredited law schools to provide their students with bar examination preparatory programs and to award law school academic credit to students taking such programs.\textsuperscript{13}

Legal educators are increasingly encouraging or mandating that law students, particularly academically weaker law students, take “bar courses” in a effort to improve their bar examination passage rate.\textsuperscript{14} Some law schools, including the law school at the authors’ University, mandate that students with lower class ranks take upper division, bar examination subject matter courses in an effort to improve those students’ passage rates.

\textsuperscript{10} Calculated by multiplying the average in-state or resident tuition rates of the 191 ABA accredited law schools by the total number of J.D. students enrolled in those schools. This does not include the tuition collected from the 8,000 LL.M. or other advanced degree students reported as enrolled in those schools in the 2005-2006 school year or take into consideration the effect of out-of-state tuition charges (which would increase tuition collections) or the discount effect of law school scholarship aid (which would decrease tuition collections).See: ABA-LSAC, Official Guide, supra p. 56-65 and 836.


\textsuperscript{12} See: Association of American Law Schools, Committee on Bar Admission and Lawyer Performance and Richard A. White, Final AALS Survey of Law Schools on Programs and Courses Designed to Enhance Bar Examination Performance (2001), which catalogs such programs at many ABA accredited law schools.

\textsuperscript{13} See: ABA, Section of Legal Education and Admission to the Bar, Rules of Procedure for Approval of Law Schools, , Standard 302(a) and Interpretation 302-7, available at http://www.abanet.org/legaled/dstandards/Chapter3.html, which provides that accredited law schools may give academic credit for bar examination preparatory programs as long as the credit is to meet law school graduation credit hour requirements which exceed the 83 credit hour minimum mandated by the ABA for graduation from law school.

An ABA study of law school curricula covering the years 1992-2002 noted that newly accredited law schools often had requirements which mandated that students take upper division, bar examination subject matter courses. In addition the authors of this article note that the University of Oklahoma College of Law, hardly a newly accredited law school, requires that students take a minimum of six upper division, bar examination subject matter courses.

The authors of this article have been unable to find any reported study which examines the issue of whether there is an empirically proven relationship between taking bar examination subject matter courses and passing state bar examinations. This study was undertaken to examine the performance of all 2001-2005 graduates of Saint Louis University School of Law who took the Missouri bar examination as their first state bar examination to explore whether there was a relationship between taking such courses and passing the bar examination on the first attempt. The study also explored whether there was a relationship between those graduates’ Law School Admission Test (LSAT) scores, undergraduate grade point averages (UGPA), Law School Admission Council (LSAC) scores, and entering law school scores.

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15 See: Saint Louis University School of Law Student Handbook, Ch. 8, Section F, paragraph 4, August 2006, available at http://www.law.slu.edu/studentservices/student_handbook.pdf, which mandates enrollment in bar examination subject matter courses for all students with a cumulative grade point average between 2.00 and 2.25. This encompasses, roughly, students who rank in the bottom ten percent of their class.

16 American Bar Association, Section of Legal Education and Admission to the Bar, A Survey of Law School Curricula, 1992-2002, 18 (December 2004). For example, Florida Coastal School of Law requires that upper division students take Constitutional Law I and II, Business Associations, Criminal Procedure, Evidence, Family Law and Sales, all topics tested on the bar examination, Student Handbook, Chapter VI, p. 27, available at http://www.fcsl.edu/students/handbook.pdf; the Ave Maria School of Law requires that upper division students take the following bar examination subject matter courses: Business Organizations, Constitutional Law, Criminal Procedure and Evidence, available at http://avemarialaw.edu/prospective/curriculum/cur3.cfm.

index scores, law school final class standing (by quartiles) and the ability to pass the Missouri bar examination on the first attempt.

II. BACKGROUND AND RESEARCH QUESTION

A. Law Schools Are Concerned With Bar Examination Failure Rates

Law schools are becoming increasingly alarmed by the bar examination passage statistics. Today’s students are consumers of educational services. They seek out law schools with higher reported bar passage rates. Organizations, such as U.S. News and World Report, publish annual guides which purport to “rank” the quality of ABA accredited law schools. One factor in that rating system is a law school’s bar examination passage rate.

Bar examination passage rates impact the ranking and the perceived prestige of law schools; affect the individual school’s ability to recruit top quality students; and as enrollment declines, affect tuition and fee revenue for the school. Lower bar examination passage rates affect law school rankings. Lower rankings result in schools attracting students with lower LSAT scores. Lower quality students, when measured by LSAT scores, fail bar examinations in greater numbers when compared to students with

18 Day, supra at 323; Howarth, supra,at 928.
19 Day, supra at 323.
21 Day, supra, at 340.
22 U. S. News, Law Methodology, supra.
higher LSAT scores.\textsuperscript{24} This can result in a law school’s ranking being further reduced, even less qualified students being recruited, who then perform even more poorly on bar examinations. This downward spiral can continue until the law school’s ABA accreditation is in jeopardy.\textsuperscript{25}

Previous studies have identified three areas which affect bar examination passage rates: (1) LSAT scores;\textsuperscript{26} (2) undergraduate grade point averages (UGPA);\textsuperscript{27} and (3) law school class standing or rank based on law school final grade point average (LGPA).\textsuperscript{28}

\textbf{B. The Relationship Between LSAT Scores and Bar Examination Passage}

The LSAT is the standard admission test which is administered by the Law School Admission Council (LSAC).\textsuperscript{29} It is required for admission by all ABA accredited law schools.\textsuperscript{30} Numerous studies have shown that there is a positive correlation between LSAT scores and bar examination passage rates.\textsuperscript{31} That is, the higher a graduate's LSAT score, the more likely that the graduate will pass a state bar examination. Law schools must annually report to the ABA and LSAC the median LSAT score of each year’s

\textsuperscript{25} ABA, Rules of Procedure, Standard 301, supra; See also American Bar Association web site, available at http:www.abanet.org/legaled/approvedlawschools/approved.html, which reports that the Section on Legal Education and Admission to the Bar voted on August 4-5, 2005 to place Whittier Law School in Costa Mesa, California and Golden Gate University School of Law in San Francisco, California on two years probation beginning on August 9, 2005 for, among other issues, their low bar examination passage rates. See also: http://www.law.whittier.edu/about_accreditation.asp; and http://www.ggu/school_of_law/about_ggu_law/accreditation.
\textsuperscript{26} Wightman, Bar Passage Study, supra at 23.
\textsuperscript{27} Id. at 28-29
\textsuperscript{28} Id. at 24.
\textsuperscript{29} The Law School Admission Council is a not for profit corporation with more than 200 American and Canadian law schools as members. The LSAC administers the Law School Admission Test. Review "A History of the Law School Admission Council and the LSAT", Keynote Address, 1998 LSAC Annual Meeting, by William P. LaPiana, Rita and Joseph Solomon Professor, New York Law School which is available at http://www.lsac.org.
\textsuperscript{30} See: LSAC, About the LSAC, available at http://www.lasc.org
\textsuperscript{31} See: Wightman, Bar Passage Study, supra at 23; See also, Day, supra at 328 and note 27 which reports a study finding an extremely high Pierson correlation between LSAT score and bar examination passage rates.
admitted class as well as the LSAT scores of the students at the 25th and 75th percentile of the admitted class. This data for all law schools is compiled and published.\textsuperscript{32} This study confirms a relationship between LSAT scores and bar examination passage for the sample population.

\textbf{C. The Relationship Between Undergraduate Grade Point Averages and Bar Examination Passage}

Undergraduate grade point averages (UGPA) have also been shown to have a positive association with bar examination passage although the association is weaker than the association of LSAT scores and bar examination passage.\textsuperscript{33} The LSAT score and the UGPA, especially in combination, are significant predictors of law school performance.\textsuperscript{34} The LSAT is a better predictor of law school success than UGPA alone, but both in combination were the best predictor of law school success.\textsuperscript{35} This study confirms a relationship between UGPA, LSAT scores and bar examination passage.

\textsuperscript{32}See for example: ABA-LSAC Official Guide to ABA -Approved Law Schools, (2007 Edition), supra. Interestingly, the LSAC also post on-line an electronic calculator which allows students to input their UGPA and LSAT score to determine their likelihood of admission to any law school, available at http:www.official guide.lsac.org/ugpasearch/SEARCH3.


\textsuperscript{34} Wightman, Predicting Academic Success, supra at 15.

\textsuperscript{35} Wightman, Predicting Academic Success, supra at 15. Professor Wightman found this cumulative relationship after grouping law schools into six clusters based on the characteristics of the students, including, school selectivity, median LSAT scores, median UGPA, and standardized law school GPAs.
D. The Relationship Between Law School Class Rank and Bar Examination Passage

The third factor which has been shown to have an association with bar examination passage rates is law school class standing or rank.\textsuperscript{36} This phenomenon has been confirmed to apply to almost all law schools.\textsuperscript{37} This study confirmed an association between bar examination passage and final law school class rank.

As one can see from Table 1, 100% of the graduates in this five year study whose final law school grade point average (LGPA) ranked in the upper quartile of their graduating class passed the Missouri bar examination on their first attempt; 95.5% of those ranked in the second quartile of their law school graduating class passed; 82.6% of those ranked in the third quartile passed; and 49.5% of those ranked in the fourth quartile passed. The drop in passage rate is even more dramatic for those graduates who ranked in the bottom 10% of their graduating class based on LGPA. Of that group, only 27.8% passed the Missouri bar examination on their first attempt.

\textsuperscript{36} Day, supra at 329.
\textsuperscript{37} Wightman, Bar Passage Study, supra at 23; Day, supra at 329; and Richard H. Sander, \textit{A Systemic Analysis of Affirmative Action in American Law Schools}, 57 Stan. L. Rev. 367, 444 (2004-2005). Professor Sander's study using logistics regression demonstrated the law school GPA had the highest predictive value of bar examination passage with a standard coefficient of .76 and a Chi-squared test statistic of 808.16.
Table 1: Missouri Bar Examination Passage 2001-2006 by Class Rank Based on Final Law School Grade Point Average

<table>
<thead>
<tr>
<th>Class Rank</th>
<th>Pass: N and %</th>
<th>Fail: N and %</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Quarter</td>
<td>209 100%</td>
<td>0 0%</td>
</tr>
<tr>
<td>Second Quarter</td>
<td>219 95.6%</td>
<td>10 4.4%</td>
</tr>
<tr>
<td>Third Quarter</td>
<td>166 82.6%</td>
<td>35 17.4%</td>
</tr>
<tr>
<td>Fourth Quarter</td>
<td>93 49.5%</td>
<td>95 50.5%</td>
</tr>
<tr>
<td>Bottom Ten Percent</td>
<td>20 27.8%</td>
<td>52 72.2%</td>
</tr>
</tbody>
</table>

E. Law School Curricula

The 191 ABA accredited law schools must provide a minimum of 58,000 minutes of instruction to award a law degree. 38 The ABA requirement can be fulfilled by requiring a minimum of 83 semester hours of course work to obtain the degree. 39 The ABA surveyed all law schools in 2002 and determined that the range of hours required by accredited schools to obtain the law degree varied from 83 to 97 with 88 being the average number of semester hours required to complete the degree. 40

The ABA does not, however, mandate which specific courses must be taught in law schools.\textsuperscript{41} The same curricula survey however, found a fairly uniform curriculum at all ABA accredited law schools. A typical course of instruction took six semesters (three years) of full-time class work to complete. Part-time programs typically take four to five years of study to complete. The vast majority of all law schools have a required first year curriculum with the second and third year curriculum being devoted to electives chosen by students to focus their study toward particular areas of concentration or specialization.\textsuperscript{42}

Within this three year scheme, the first year required courses at most law schools were almost identical. Typically, the first year curriculum consisted of two, fifteen course hour semesters for a total of thirty semester hours. The ABA survey found that the typical required curriculum had not changed since its similar survey in 1975. The first year, required courses most often taught were: Contracts, Federal Civil Procedure, Property, Torts, Criminal Law, Constitutional Law and Legal Research and Writing.\textsuperscript{43} Upper division courses at most law schools are elective in nature to allow students to individualize their courses of instruction.\textsuperscript{44}

The topics tested on the Multistate Bar Examination (MBE) are: Contracts, Torts, Constitutional Law, Criminal Law, Evidence and Real Property.\textsuperscript{45} The topics which may be tested on the Multistate Essay Examination (MEE) are: Agency, Partnerships, Commercial Paper, Conflicts of Law, Corporations, Decedents' Estates, Family Law,

\textsuperscript{41} ABA Standards Rules, Standard 301 (a), supra, approved June 4, 2004, which states "a law school shall maintain an educational program that prepares its students for admission to the bar and responsible participation in the profession" but does not mandate specific subjects be taught.
\textsuperscript{42}ABA, Survey of Law School Curricula, supra at 13-16.
\textsuperscript{43}Id. at 23-27.
\textsuperscript{44}Id. at 30.
\textsuperscript{45}Available at http://www.ncbex.org/multistate-tests/mbe.
The topics tested on the Missouri bar examination may include: Administrative Law, Agency, Partnerships, Corporations, Conflicts of Law, Estates, Family Law, Remedies, Missouri Civil Procedure, Trusts and Future Interests, Sales, Commercial Paper and Secured Transactions. Thus students at most law schools are only required to take courses which cover six of the twenty topics potentially tested on state bar examinations.

F. The Perceived Relationship Between Bar Examination Passage Rates and Law School Curricula

Law school administrators and faculty are increasingly pointing the blame for low bar examination passage rates on the failure of law students to elect to take courses in bar examination subjects during the second and third years of their legal education. These courses are perceived by faculty, administration and, most importantly by students to be harder, more demanding and less fun than other elective course or clinical programs for which students can receive credit.

Law school faculties, in an effort to improve bar examination passage rates, are strongly advocating that students take upper division, bar examination, subject matter courses. One solution to the bar examination passage problem which is advocated by many faculty members is to force lower ranked students to take more upper division, bar examination subject matter courses. The stated logic behind this approach is that the failure of at risk students to pass bar examinations is caused by their avoidance of the

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46 Available at http://www.nebex.org/multistate-tests/mee.
48 Day, supra at 343; Kristin Booth Glen, Essay: When and Where We Enter: Rethinking Admission to the Legal Profession, 102 Colum. L. Rev. 1696, 1711 (October 2002). Professor Glen criticized the overemphasis on teaching bar examination subject matter courses to the detriment of lawyering skills courses.
49 Day, supra at 343.
difficult, upper division, elective courses whose subject matter is tested on bar examinations.\textsuperscript{50} One professor has proclaimed "[b]oldly put, if students have not taken these courses or have done poorly in them, they will not pass the examination."\textsuperscript{51}

The difficulty with this logic is that there is no empirical evidence to support the conclusion that there is a relationship between the number of bar examination subject matter courses taken and bar examination passage rates. Indeed, without any statistical analysis one can easily see that the opposite is true, at least for the upper two quartiles of law school graduates. Those students have almost a 100% passage rate on state bar examinations.\textsuperscript{52} Unless they are all taking the exact same upper division, elective, bar examination subject matter courses, it cannot be shown that there is a positive relationship between bar examination subject matter courses taken and bar examination passage rates.

Students who rank in the upper two quartiles of their law school graduating class pass bar examinations regardless of which law school courses they take. This study confirmed that there was no statistically significant difference in the mean number of upper division, bar examination subject matter courses taken by graduates who ranked in the upper two quartiles of their law school graduating class who passed and similarly ranked students who failed the Missouri bar examination on their first attempt. The study also confirmed that there was no statistical relationship between the number of bar examination subject matter courses taken and bar examination passage for graduates who rank in the upper two quartiles of their law school graduating class.

\textsuperscript{50} Id. at 343.
\textsuperscript{51} Id. at 343.
\textsuperscript{52} See Table 1 above and Day, supra at 329.
The relationship between the mean number of upper division, bar examination subject matter courses taken in law school and bar examination passage for graduates in the bottom two quartiles of their law school class is less clear. There is a statistically significant difference in the mean number of such classes taken when comparing those graduates who passed and those who failed the bar examination for graduates who are ranked in the third and fourth quartiles of their law school class.

However, the study showed that there was only a statistically significant relationship between the number of such courses taken and bar examination passage for graduates who ranked in the third quartile of their law school class. There was no statistically significant relationship between the number of such courses taken and bar examination passage for graduates who ranked in the fourth quartile of their law school class.

Furthermore, the study revealed that there was no statistically significant difference in the mean number of upper division, bar examination subject matter courses taken by graduates who rank in the bottom ten percent of their graduating classes who passed the Missouri bar examination on the first attempt when compared to similarly ranked graduates who failed. In addition, the study demonstrated that there was no statistically significant relationship between the number of such courses taken and bar examination passage for graduates who ranked in the bottom ten percent of their law school class.

Interestingly, the mean number of upper division, bar examination subject matter courses taken by students ranked in the bottom ten percent of their class who failed the bar examination is slightly higher than the mean number of upper division, bar
examination subject matter classes taken by students in the first and second quartiles of their class who passed the bar examination.

III. METHOD

A. Sample.

The sample in this study consisted of all graduates from Saint Louis University School of Law (hereafter the School of Law) in the years 2001-2005 who took the Missouri bar examination between February 2001 and February 2006 as their first bar examination. The sample consisted of 827 examination takers who participated in eleven different Missouri bar examinations during this period. The sample, categorized

53 Saint Louis University School of Law (hereafter the "School of Law") is a private, Catholic, Jesuit, institution which traces its roots to the Saint Louis Law Institute which was founded in 1843. It has been ABA accredited since 1924 and has an approximate total annual enrollment of 625 students in its full-time and 240 students in its part-time programs.

54 The School of Law graduates students in January, May and August of each year. All graduates in calendar years 2001-2005, including, J.D. and dual degree (i.e., J.D./M.B.A.) students were included in the study provided that the Missouri bar examination was the first bar examination taken after graduation.

55 The Missouri bar examination consists of two parts, the Multistate Bar Examination (MBE) and the Essay Examination (EE). The EE consists of a Missouri Essay (ME) component, the Multistate Essay Examination (MEE) and the Multistate Performance Test (MPT). Applicants are also required to pass the Multistate Professional Responsibility Examination (MPRE) and a character and fitness investigation to gain admission to the Missouri bar. This study only analyzes whether students "passed" or "failed" the Missouri bar examination which consisted of the MBE, EE, ME, MEE and MPT.

56 The Missouri bar examination is administered by the Missouri Board of Law Examiners which is appointed and authorized by the Missouri Supreme Court to determine the qualifications and fitness of applicants for admission to the Missouri bar. Approximately seventy five percent of Saint Louis University School of Law graduates took the Missouri bar examination as their first bar examination during the study period. The Board of Law Examiners reports the identities of students who pass and fail each bar examination to the School of Law. This study does not include graduates who took the bar examination in other states as their first bar examination and does not include graduates who retake the examination after failing the bar examination on their first attempt.

57 The Missouri bar examination is given in February and July each year during the study period. This study includes graduates who took the Missouri bar examination between February 2001 and February 2006. Some January 2001 graduates took the February 2001 Missouri bar examination and some August 2005 graduates took the February 2006 Missouri bar examination as their first bar examination.
by sex, included 429 males and 398 females. The sample included 625 students who began their studies as full-time student and 202 who began as part-time students.

B. Variables.

Many of the variables collected in this study were obtained by inspecting Law School Data Assembly Service (LSDAS) reports which are provided to law schools to which potential students apply. These variables included: sex, which was recorded based on the graduate's self-identification; age, based on age in years at the graduate's birthday which immediately preceded the bar examination; and race.

The race variable was coded based on the graduate's self-identification on the LSDAS report. Where the graduate did not indicate his or her race on the LSDAS report, the graduate's race was determined by reviewing the graduate's law school application or other law school data. The study included 734 Caucasians (88.8%), 47 Black/African Americans (5.7%), 24 Asian/Pacific Islanders (2.9%), 10 Mexican/Hispanics (1.2%) and 12 Native American/Other/Unknown (1.5%).

The graduate's undergraduate grade point average (UGPA) was also determined by inspecting the LSDAS report. That report includes in its calculation all grades for

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58 Sexual classification was based on the graduates' self identification on their applications to the Law School Data Assembly Service (LSDAS) which compiles transcripts, letters of recommendation and Law School Admission Test (LSAT) scores and which provides a report of this data to law schools to which the applicants apply.
59 The School of Law admits student only in the fall semester each year. Approximately 235-245 full-time students and 75-95 part-time students are admitted each year. Full-time and part-time students are allowed to transfer between the programs after their first two semesters and may change their status as full or part-time students in each semester, thereafter, depending on the number of credit hours in which they enroll. Part-time students take between 8-11 credit hours per semester. Full-time students take between 12-17 credit hours per semester. Student categorization in this study is based on the incoming status of the student at initial enrollment.
60 Five categories were coded for the race variable in this study, Caucasian, Black/African American, Asian/Pacific Islander, Mexican/Hispanic and Other/Unknown. Mexican/Chicano/Chicana were combined with Hispanic because of the small number of graduates (10) in those categories. Similarly, Native American/Alaskan Native were combined with the Other/Unknown due to the small number of graduates (11) in those categories.
undergraduate coursework completed and is not limited to the grades earned at the undergraduate institution from which the graduate received his or her undergraduate degree.

The graduate's Law School Admission Test (LSAT)\(^{61}\) score was also determined by inspecting the LSDAS report. The average LSAT score was recorded in cases where the graduate took multiple LSAT tests.\(^{62}\)

The LSAC index score variable was computed by the LSAC based on a formula selected by the School of Law which provided approximately equal weight to the LSAT score and the UGPA.\(^{63}\) The LSAC index score is used by the School of Law to assist in its admission process.

The following variables were collected by inspecting School of Law data bases, records and files: the student's graduation date;\(^{64}\) whether the graduate initially enrolled in the full-time or part-time program;\(^{65}\) the graduate's class rank, by quartiles, at

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\(^{61}\) The LSAC administers the LSAT. It states in its Interpretive Guide for LSAT Score Users (2006), that tests are graded on a 120-180 point scale. Score results are normally distributed and have the same meaning from one administration to another based on the statistical process of equating. Equated scores represent a comparable level of ability between test takers regardless of when the test was taken, even though the average ability of test takers one test may exceed the average ability of those taking a different test. The LSAC reports that the LSAT is highly reliable, meaning that it would be reproducible for a given test taker regardless of the date the test is taken. The reliability coefficient, measured on a scale from 0-1, has consistently been at least.9. The larger the reliability coefficient, the more consistent a test taker's results should be. The LSAT reports that there were 113,713 test takers during calendar year 2005. The mean score was 151.27 with a standard deviation of 9.71.

\(^{62}\) The requirement to report average LSAT scores to the ABA and LSAC was changed in December 2005. Law schools may now report the highest LSAT score when reporting data on their incoming class. See: LSAC Report No. 2006-2, July 2006, p.2. This study used the average of the scores for multiple test takers for the purpose of uniformity in analysis.

\(^{63}\) The School of Law's LSAC index score is computed according to the following formula: Index Score = 0.033(LSAT) + 0.408(UGPA) - 3.594, which results in an index score between 1.2 and 4.1. This formula weights LSAT score at 51.71% and UGPA at 48.29%.

\(^{64}\) The calendar year in which the student graduated from the School of Law. The School of Law confers degrees in January, May and August.

\(^{65}\) Students in the School of Law are initially categorized by the number of hours in which they enroll when they matriculate. Full-time students initially enroll in two fifteen hour semesters and take classes in the day. Part-time students initially enroll in three ten hour semesters in the evenings. During the period of this
graduation;\textsuperscript{66} whether the graduate ranked in the bottom ten percent of his or her graduating class;\textsuperscript{67} and the number of elective, upper division, bar examination subject matter courses taken by the graduate.\textsuperscript{68}

The dates that graduates took the Missouri bar examination and whether the graduates passed or failed the examinations were reported to the School of Law by the Missouri Board of Law Examiners.

\textsuperscript{66} This variable was coded based on the graduate's final law school grade point average (LGPA). All School of Law graduates during a calendar year are ranked together based on their LGPA regardless of whether they graduate in January, May or August. Graduates whose final LGPA placed them in the 1st-25th percentile of their graduating class were assigned to the "First Quartile"; graduates whose final LGPA placed them in the 26th-50th percentile were assigned to the "Second Quartile;" graduates whose final LGPA placed them in the 51st-75th percentile were assigned to the "Third Quartile;" and graduates whose final LGPA placed them in the 76th -100th percentile were assigned the "Fourth Quartile."

\textsuperscript{67} Graduates were assigned to the "Bottom Ten Percent-Yes" category if their final LGPA placed them between the 91st and 100th percentile of their graduating class. They were assigned to the "Bottom Ten Percent-No" category if their final LGPA placed them in the 1st-90th percentile of their graduating class. It should be noted that graduates who are coded as "Bottom Ten Percent-Yes" also appear in the "Fourth Quartile" category as "Bottom Ten Percent-Yes" is a subset of the "Fourth Quartile."

\textsuperscript{68} All School of Law graduates (except LL.M. students) are required to take the core 30 hour, first year curriculum which consists of Contracts, Torts, Criminal Law, Federal Civil Procedure, Constitutional Law I, Property and Legal Research and Writing. All of these subjects, except for Legal Research and Writing are tested on the bar examination in Missouri. School of Law graduates may also elect to take the following, upper division, courses whose subject matter is also tested on the Missouri bar examination: Administrative Law, Business Associations, Commercial Transactions, Conflicts of Law, Constitutional Law II, Criminal Procedure, Evidence, Family Law, First Amendment, Missouri Civil Procedure, Real Estate Transactions, Remedies, Secured Transactions and Trusts and Estates. Since all graduates are required to take the core, 30 hour, first year curriculum, the variable collected in this study was the total number of elective, upper division, bar examination subject matter courses taken by each graduate. The study did not attempt to correlate the graduate's ability to pass individual sections tested on the Missouri bar examination with whether the graduate took the underlying bar examination subject matter course while in law school because some subjects are tested on multiple parts of the bar examination; some subjects are tested at various weights or not tested at all on bar examinations in different years; and because bar examination test scores on individual subjects are not released for individual test takers unless that test taker specifically authorizes the release of that data which would result in an incomplete data base.
C. Data Analysis

The calculations used in this study were performed using the Statistical Program for Social Sciences (SPSS), version 13.0. The statistical tests were conducted at a .05 significance level. Independent sample t-tests were used to determine whether there was a statistically significant difference in the means of the variables tested. Where significance was found, it was reported as a significant "difference." Binary logistic regression tests were also conducted. Logistic regressions allow a researcher to explore the relationships of several independent variables to a dependent or outcome variable. It allows for the control of selected variables in order to determine whether one independent variable is related to a dependent or outcome variable.69 In this study, a finding of a significant result on the binary logistic regression test was reported as a "relationship" or was reported as a variable which was a "reliable predictor" of bar examination passage.

It has been noted that for very large samples that "even very small differences between groups can become statistically significant. This does not mean that the difference has any practical effect."70 The authors have utilized eta squared calculations (sometimes called 'strength of association') to determine the effect size or magnitude of the difference where statistical significance was found on the independent t-tests. The eta squared test provides an indication of the proportion of the variance of the dependent variable which is explained by the independent variable.71 The formula used for calculating eta squared was:

\[
\text{Eta squared} = \frac{t^2}{t^2 + (N_1 + N_2 - 2)}. 
\]

70 Id. at 201.
71 Id. at 208.
The following guidelines\textsuperscript{72} were used to interpret the eta squared calculation:

\[ .01 = \text{small effect} \]
\[ .06 = \text{moderate effect} \]
\[ .14 = \text{large effect}. \]

IV. RESULTS AND DISCUSSION

Result 1: There are statistically significant differences in mean LSAT scores, mean UGPA, mean LSAC index scores, and the mean number of bar examination subject matter courses taken when comparing those graduates who passed and those who failed the Missouri bar examination on the first attempt.

Table 2: Independent-sample t-test and Binary Logistic Regression Output For All Graduates

<table>
<thead>
<tr>
<th>Bar Result</th>
<th>Number Grads</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>t Stat</th>
<th>Sig.</th>
<th>Wald</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>LSAT Score</td>
<td>Pass</td>
<td>682</td>
<td>154.42</td>
<td>5.21</td>
<td>10.959***</td>
<td>.000</td>
<td>15.611***</td>
</tr>
<tr>
<td></td>
<td>Fail</td>
<td>139</td>
<td>149.08</td>
<td>5.34</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UGPA</td>
<td>Pass</td>
<td>678</td>
<td>3.30</td>
<td>.42</td>
<td>7.251***</td>
<td>.000</td>
<td>8.444**</td>
</tr>
<tr>
<td></td>
<td>Fail</td>
<td>138</td>
<td>3.00</td>
<td>.43</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LSAC Index</td>
<td>Pass</td>
<td>678</td>
<td>2.85</td>
<td>.26</td>
<td>11.696***</td>
<td>.000</td>
<td>3.201</td>
</tr>
<tr>
<td></td>
<td>Fail</td>
<td>138</td>
<td>2.56</td>
<td>.27</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bar Courses</td>
<td>Pass</td>
<td>687</td>
<td>8.85</td>
<td>1.52</td>
<td>2.329*</td>
<td>.020*</td>
<td>5.145*</td>
</tr>
<tr>
<td></td>
<td>Fail</td>
<td>140</td>
<td>8.51</td>
<td>1.62</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(*=p < .05; **=p < .01; ***=p < .001\)

The predictive values of these variables were born out by an analysis of the sample population in this study. Tables 2 demonstrates that there was a statistically significant difference in mean LSAT scores, mean UGPA, mean LSAC index scores, and the mean number of upper division, bar examination subject matter courses taken when comparing those graduates who passed and those who failed the Missouri bar examination on their first attempt. LSAT scores demonstrate a larger difference in means than the difference in the mean UGPA for those who passed and those who failed the bar examination when each of those variables was considered individually. The combination of those two variables into the LSAC index score resulted in the largest and most statistically significant difference when comparing those graduates who passed and those who failed the Missouri bar examination in the study's sample population.

The practical significance of the relationship between the number of upper division, bar examination subject matter courses taken and bar examination passage was highly dependent on class rank by quartiles as shown in the tables and results sections below. Analyzing the significance of the number of bar examination subject matter courses and bar examination passage by class rank demonstrated that there was only a statistically significant relationship between those variables for the third quartile of law school graduates. There was no statistically significant relationship between the number of bar examination subject matter courses taken and bar examination passage for graduates in the first, second, and fourth quartiles or for graduates who ranked in the bottom ten percent of their graduating class.
The first independent-sample t-test was conducted to compare whether there was a statistically significant difference in the mean LSAT scores when comparing graduates who passed and those who failed the Missouri bar examination. The test results shown in Table 2 demonstrated that there was a statistically significant difference. [passed (mean = 154.4164, SD 5.21121); failed (mean = 149.0791, SD 5.34202); t(819) = 10.959, p < .001.] The magnitude of the difference explained by LSAT score was also large (eta squared = .1304).

The binary logistic regression test resulted in a Wald criterion which demonstrated that LSAT scores reliably predicted bar examination passage when considering all test takers [z = 15.611, p < .001].

The second independent-sample t-test was conducted to compare whether there was a statistically significant difference in mean UGPA for graduates who passed and those who failed the Missouri bar examination. The test results shown in Table 2 demonstrated that there was a statistically significant difference in mean UGPA when comparing those graduates who passed and those who failed bar examination although the difference was not statistically as large as the difference in mean LSAT scores for graduates who passed and failed the Missouri bar examination. [passed (mean = 3.2952, SD .42057); failed (mean = 3.0089, SD .43338); t(814) = 7.251, p = <.001.] The magnitude of the difference explained by UGPA was moderate (eta squared = .0607).

The binary logistic regression demonstrated that UGPA served as a reliable predictor for bar examination passage when considering all test takers [z = 8.444, p < .01].

The third independent-sample t-test was conducted to determine whether there was a statistically significant difference in mean LSAC index scores when comparing
those graduates who passed and those who failed the Missouri bar examination.

Remember from footnote 63 that the School of Law uses a LSAC index formula which provides approximately equal weight to the LSAT score and the UGPA. As reported in previous studies, the combination of LSAT score and UGPA is a stronger predictor of law school performance, as measured by final law school grade point average, than either LSAT score or UGPA alone. As seen in Table 2, this study confirmed that there was a statistically larger difference in mean LSAC index scores when comparing those graduates who passed and those who failed the bar examination than the difference in the means of either LSAT scores or UGPA alone when comparing those who passed and those who failed the Missouri bar examination. [passed (mean = 2.8456, SD .26127); failed (mean = 2.5580, SD .27334); t(814) = 11.696, p = <.001] The magnitude of the difference explained by the LSAC index was large (eta squared = .1439).

The binary logistic regression, however, demonstrated that the LSAC index was not a reliable predictor of bar examination passage when controlling for other variables [z = 3.301, p > .05]. Variables which are significant in bivariate analysis sometimes become insignificant when other factors are controlled for in a multivariate analysis.

The fourth independent t test was conducted to determine whether there was a statistically significant difference in the number of upper division, elective, bar examination subject matter courses taken when comparing those graduates who passed and those who failed the bar examination. As can be seen in Table 2, there was a statistically significant difference in the number of such courses taken when comparing graduates who passed and those who failed the bar examination [passed (mean 8.85, SD 1.52); failed (mean 8.51, SD 1.62); t(825) = 2.329, p =<.05]. The magnitude of the

73 Wightman, Predicting Academic Success, supra at 15.
difference explained by the number of bar examination courses taken was very small (eta squared = .006).

Binary logistic regression demonstrated that the number of bar examination subject matter courses taken was a reliable predictor of bar examination passage when considering all graduates \([z = 5.145, p = <.05]\). However, caution must be exercised in interpreting this result as the relationship between bar examination passage and the number of upper division, bar examination subject matter courses taken appears to be highly dependent on class rank. As shown in the sections below, there was no relationship between the number of bar examination subject matter courses taken and bar examination passage for graduates who ranked in the first, second and fourth quartile or for those graduates who ranked in the bottom ten percent of their graduating class. The only statistically significant relationship was for graduates who ranked in the third quartile of their graduating class.

Result 2: There was a strong association between law school class rank and passage of the bar examination on the first attempt.

Table 1 above demonstrates that there is a strong association between a graduate's final class rank, by quartiles based on final LGPA, and bar examination passage. Graduates of the School of Law who ranked in the first quartile of their law school graduating class passed the bar examination at a 100% rate over the five year period of the study. Graduates who ranked in the second quartile of their law school graduating class passed the bar examination at a 95.6% rate during the same period. Graduates who
ranked in the third quartile of their graduating class passed the bar examination at an 82.6% rate and the bar examination passage rate dropped to 49.5% for those graduates who ranked in the fourth quartile of their graduating class.

The association becomes even more apparent for those graduates who ranked in the bottom ten percent of their graduating class. Those graduates passed the bar examination at a 27.6% rate during the five year period of the study.

Result 3: There was no statistically significant difference in the mean number of bar examination subject matter courses taken by those graduate ranking in the top two quarters of their law school graduating class who passed when compared to similarly ranked graduates who failed the Missouri bar examination on the first attempt.

Table 3: First Quartile Ranked Graduates' Missouri Bar Examination Results, LSAT Scores, Undergraduate Grade Point Average, LSAC Index Score and Number of Upper Division, Bar Examination Subject Matter Courses Taken

<table>
<thead>
<tr>
<th>Bar Result</th>
<th>Number Grads</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>T stat</th>
<th>Sig.</th>
<th>Wald</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>LSAT Score</td>
<td>Pass</td>
<td>208</td>
<td>156.62</td>
<td>5.27</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td>Fail</td>
<td>0</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>UGPA</td>
<td>Pass</td>
<td>207</td>
<td>3.49</td>
<td>.38</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td>Fail</td>
<td>0</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>LSAC Index</td>
<td>Pass</td>
<td>207</td>
<td>3.00</td>
<td>.26</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td>Fail</td>
<td>0</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Bar Courses</td>
<td>Pass</td>
<td>209</td>
<td>8.78</td>
<td>1.46</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td>Fail</td>
<td>0</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
</tbody>
</table>
As demonstrated in Table 3, all graduates who ranked in the first quartile of their graduating class passed the Missouri bar examination. Therefore, it was impossible to run any statistical tests on the difference between those graduates who passed and those who failed the examination. However, since we know that they did not take the same number of bar examination subject matter courses (mean = 8.78, SD = 1.46), one could argue that there was no relationship between the number of such courses taken and bar examination passage for graduates who ranked in the first quartile of their graduating class.

Table 4: Independent-sample t-test and Binary Logistic Regression Output for Second Quartile Ranked Graduates on the 2001-2006 Missouri Bar Examinations

<table>
<thead>
<tr>
<th>Bar Result</th>
<th>Number</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>t stat</th>
<th>Sig.</th>
<th>Wald</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>LSAT Scores</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pass</td>
<td>217</td>
<td>154.26</td>
<td>4.96</td>
<td>3.076**</td>
<td>.002**</td>
<td>.699</td>
<td>.403</td>
</tr>
<tr>
<td>Fail</td>
<td>10</td>
<td>149.20</td>
<td>7.47</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UGPA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pass</td>
<td>216</td>
<td>3.30</td>
<td>.42</td>
<td>.479</td>
<td>.632</td>
<td>.025</td>
<td>.874</td>
</tr>
<tr>
<td>Fail</td>
<td>10</td>
<td>3.23</td>
<td>.41</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LSAC Index</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pass</td>
<td>216</td>
<td>2.84</td>
<td>.24</td>
<td>2.438*</td>
<td>.016*</td>
<td>.003</td>
<td>.958</td>
</tr>
<tr>
<td>Fail</td>
<td>10</td>
<td>2.65</td>
<td>.32</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bar Courses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pass</td>
<td>219</td>
<td>8.68</td>
<td>1.53</td>
<td>.962</td>
<td>.337</td>
<td>.613</td>
<td>.434</td>
</tr>
<tr>
<td>Fail</td>
<td>10</td>
<td>8.20</td>
<td>1.75</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* = p < .05; ** = p < .01
As demonstrated in Table 4 an independent-sample t-test was conducted to determine whether there was a statistically significant difference in the mean number of upper division, bar examination subject matter courses taken by graduates who ranked in the second quarter of their law school graduating class when comparing those who passed and those who failed the Missouri bar examination on the first attempt. The test demonstrated that there was no statistically significant difference in the mean number of upper division, bar examination courses taken by students ranked in the second quarter of their class who passed and those who failed the Missouri bar examination on the first attempt. [passed (mean = 8.6804, SD 1.53495), failed (mean = 8.2000, SD 1.75119); t(227) = .962, p = .1685.]

Similarly, the binary logistic regression demonstrated that the number of bar examination subject matter courses taken was not a reliable predictor of bar examination passage for graduates who ranked in the second quartile of their graduating class [ z = .613, p = .434].

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74 Note: because we are using a "one-tailed" hypothesis test we must divide the "two-tailed" significance level reported in the SPSS output by 2 in order to arrive at the correct significance level to properly interpret the t-test.
Result 4: There was a statistically significant difference in the mean number of bar examination subject matter courses taken by graduates ranked in the bottom two quartiles of their law school graduating class who pass when compared to similarly ranked graduates who fail the Missouri bar examination on the first attempt. However, the binary logistic regression demonstrated that there was only a statistically significant relationship between the number of such courses taken and bar examination passage for graduates who ranked in the third quartile of their law school graduating class.

Table 5: Independent -sample t-test and Binary Logistic Regression Output for Third Quartile Ranked Graduates on the 2001-2006 Missouri Bar Examinations

<table>
<thead>
<tr>
<th>Bar Result</th>
<th>Number</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>t stat</th>
<th>Sig.</th>
<th>Wald</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>LSAT Scores</td>
<td>Pass</td>
<td>165</td>
<td>153.10</td>
<td>4.68</td>
<td>1.779</td>
<td>.077</td>
<td>2.136</td>
</tr>
<tr>
<td></td>
<td>Fail</td>
<td>34</td>
<td>151.53</td>
<td>4.75</td>
<td>1.779</td>
<td>.077</td>
<td>2.136</td>
</tr>
<tr>
<td>UGPA</td>
<td>Pass</td>
<td>165</td>
<td>3.22</td>
<td>.37</td>
<td>1.952</td>
<td>.052</td>
<td>2.167</td>
</tr>
<tr>
<td></td>
<td>Fail</td>
<td>33</td>
<td>3.09</td>
<td>.38</td>
<td>1.952</td>
<td>.052</td>
<td>2.167</td>
</tr>
<tr>
<td>LSAC Index</td>
<td>Pass</td>
<td>165</td>
<td>2.77</td>
<td>.21</td>
<td>2.144*</td>
<td>.033*</td>
<td>1.420</td>
</tr>
<tr>
<td></td>
<td>Fail</td>
<td>33</td>
<td>2.68</td>
<td>.23</td>
<td>2.144*</td>
<td>.033*</td>
<td>1.420</td>
</tr>
<tr>
<td>Bar Courses</td>
<td>Pass</td>
<td>166</td>
<td>9.03</td>
<td>1.52</td>
<td>2.913**</td>
<td>.004**</td>
<td>4.755*</td>
</tr>
<tr>
<td></td>
<td>Fail</td>
<td>35</td>
<td>8.17</td>
<td>1.87</td>
<td>2.913**</td>
<td>.004**</td>
<td>4.755*</td>
</tr>
</tbody>
</table>

* = p < .05; ** = p < .01
An independent-sample t-test was conducted to determine whether there was a statistically significant difference in the mean number of upper division, bar examination subject matter courses taken by graduates who ranked in the third quarter of their graduating class who passed when compared to similarly ranked graduates who failed the Missouri bar examination on the first attempt. The results revealed that there was a statistically significant difference. [passed (mean = 9.0301, SD 1.51927), failed (mean = 8.17060, SD 1.87060); t(197) = 2.913, p = .002.] The magnitude of the difference explained by the mean number of upper division, bar examination subject matter courses taken was small to moderate (eta squared = .041).

The binary logistic regression test also demonstrated that the number of upper division, elective bar examination subject matter courses taken was a reliable predictor of bar examination passage for graduates who ranked in the third quartile of their law school class [z = 4.755, p = .029].

The difference in the mean number of upper division, bar examination subject matter courses taken by those in the third quartile of their law school class who passed and those who failed the Missouri bar examination on their first attempt was less than one class (.85950). While there was a statistically significant difference in the mean number of upper division, bar examination subject matter classes taken by third quarter graduates who passed the bar examination when compared to those who failed the bar examination on their first attempt, the practical effect from a legal education standpoint is open to

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75 Readers should note that we divided the significance level finding .004 (two tailed) in half since we are testing a one tailed hypothesis.
debate. The difference was less than one upper division, bar examination subject matter class and the effect was isolated to the third quartile of law school graduates.

Table 6: Independent-sample t-test and Binary Logistic Regression Output for Fourth Quartile Ranked Graduates on the 2001-2006 Missouri Bar Examinations

<table>
<thead>
<tr>
<th>Bar Result</th>
<th>Number</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>t stat</th>
<th>Sig.</th>
<th>Wald</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>LSAT Score</td>
<td>Pass</td>
<td>92</td>
<td>152.16</td>
<td>4.76</td>
<td>5.522***</td>
<td>.000***</td>
<td>2.140</td>
</tr>
<tr>
<td>Fail</td>
<td>95</td>
<td>148.19</td>
<td>5.07</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UGPA</td>
<td>Pass</td>
<td>90</td>
<td>2.98</td>
<td>.38</td>
<td>.289</td>
<td>.773</td>
<td>.309</td>
</tr>
<tr>
<td>Fail</td>
<td>95</td>
<td>2.96</td>
<td>.47</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LSAC Index</td>
<td>Pass</td>
<td>90</td>
<td>2.64</td>
<td>.20</td>
<td>4.007***</td>
<td>.000***</td>
<td>.211</td>
</tr>
<tr>
<td>Fail</td>
<td>95</td>
<td>2.50</td>
<td>.27</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bar Courses</td>
<td>Pass</td>
<td>93</td>
<td>9.18</td>
<td>1.59</td>
<td>2.257*</td>
<td>.025*</td>
<td>3.168</td>
</tr>
<tr>
<td>Fail</td>
<td>95</td>
<td>8.67</td>
<td>1.50</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* = p < .05; *** = p < .001

An independent-sample t-test was conducted to determine whether there was a statistically significant difference in the mean number of upper division, bar examination subject matter courses take by graduates who ranked in the fourth quartile of their law school graduating class who passed the Missouri bar examination on their first attempt when compared to similarly ranked graduates who failed the Missouri bar examination of their first attempt. The results revealed that there was a statistically significant difference.

[passed (mean = 9.1828, SD 1.59446); failed (mean = 8.6737, SD 1.49781); t(186) =
The magnitude of the difference explained by the number of upper division, bar examination subject matter courses taken was small to moderate (eta squared = .0267).

The binary logistic regression test failed to demonstrate that the number of upper division, bar examination subject matter courses taken was a reliable predictor of bar examination passage for graduates who ranked in the fourth quartile for their law school graduating class.

Result 6: There was no statistically significant difference in the mean number of upper division, bar examination subject matter courses taken by law school graduates ranked in the bottom ten percent of their graduating class who passed the Missouri bar examination on their first attempt when compared to similarly ranked graduates who failed.

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76 Because we are using a one-tailed hypothesis test we must divide the two-tailed significance level (.025) by 2 to achieve the correct significance level for a one-tailed test.
Table 7: Independent-sample t-test and Binary Logistic Regression Output for Bottom Ten Percent Ranked Graduates on the 2001-2006 Missouri Bar Examinations

<table>
<thead>
<tr>
<th>Bar Result</th>
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<th>Mean</th>
<th>Std. Dev.</th>
<th>t stat</th>
<th>Sig.</th>
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<td>.002**</td>
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* = p < .05; ** = p < .01

An independent-sample, t-test was conducted to determine whether there was a statistically significant difference in the mean number of upper division, bar examination subject matter courses taken by graduates who ranked in the bottom ten percent of their law school graduating class who passed the Missouri bar examination on their first attempt when compared to similarly ranked graduates who failed. The test demonstrated that there was no statistically significant difference in the mean number of upper division, bar examination subject matter courses taken by graduates who ranked in the bottom ten percent of their graduating class who passed the examination when compared to similarly ranked graduates who failed. [passed ( mean = 9.0000, SD 1.41421), failed (mean =
The binary logistic regression test also failed to find that the number of upper division, bar examination subject matter courses was a reliable predictor of bar examination passage for graduates who ranked in the bottom ten percent of their law school graduating class 

\[ z = 0.428, p = 0.513 \].

V. CONCLUSION

Legal educators are alarmed by the nationwide, falling bar examination passage rate for recent law school graduates. Low bar examination passage rates deny law school graduates the opportunity to engage in their chosen profession, reflect negatively on the school from which they graduated, may result in schools with low bar examination passage rates recruiting less qualified applicants and can, in the extreme, put those schools' ABA accreditation in jeopardy.

Some schools, including the law school at the authors' University, are mandating that the weakest students enroll in upper division, bar examination subject matter courses in the belief that taking those courses will increase bar examination passage for those students. Other law schools are mandating that all students take additional bar examination subject matter courses in their second or third year of law school. Many legal scholars are prescribing this course of action as a cure for low bar examination passage rates. One author has declared that the solution to the bar examination passage rate problem is to "do the work."  

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77 Once again, the two tailed significance level (.593) was divided in half because we are testing a one tailed hypothesis.
78 Day, supra at 321.
Such a solution is overly simplistic and may be ineffective. The authors' study demonstrated that the LSAT scores, UGPA and LSAC index scores are the variables which show the most significant differences when comparing those graduates who passed and those who failed the bar examination on their first attempt. On the other hand, there was no statistically significant difference in the mean number of upper divisions, bar examination subject matter courses taken by students who ranked in the top two quartiles of their law school class who passed the bar examination when compared to similarly ranked graduates who failed.

While there was a statistically significant difference in the mean number of such courses taken by students who ranked in the bottom two quartiles of their law school graduating class who passed the bar examination when compared to similarly ranked graduates who failed, the only statistically significant relationship between the number of upper division, bar examination subject matter courses taken and bar examination passage occurred for graduates who ranked in the third quartile of their graduating class. The mean difference in the number of such courses taken by those lower ranked graduates who passed and those who failed the bar examination was less than one class. Whether taking one additional, upper division, bar examination subject matter class will have a real world affect of improving bar examination passage rates is open to debate, particularly when the affect is limited to the third quartile of law school graduates.

The authors' conclusion is further strengthened by the study's finding that there was no statistically significant difference in the mean number of upper division, bar examination subject matter classes taken by graduates ranked in the bottom ten percent of their law school class who passed the bar examination on their first attempt and similarly
ranked graduates who failed. Those are the graduates who are most at risk for bar examination failure. In this study almost seventy five percent of graduates who ranked in the bottom ten percent failed the bar examination on their first attempt even though the mean number of upper division, bar examination subject matter courses taken by those graduates was slightly higher than the mean number of such courses taken by those graduates who passed the bar examination and were ranked in the top two quarters of their law school graduating class.

Clearly, other factors are causing the extremely high bar failure rates for those graduates who rank in the bottom ten percent of their graduating class. Further research is warranted in this area. A simplistic approach of forcing the lowest ranked law school students to take more upper division, bar examination subject matter courses will not solve the bar examination failure problem.