

# Data Analytics and BI Platform for a Leading Law School

## About Customer

**Industry:** Education

The client is a leading law school in the USA. The competitive school based in United States is well known for earning law degrees and clearing most competitive California Bar exams.

## Key Challenge

The client already had an existing database designed but there was no database dictionary or reference document available. Initially the client was using MS-Access database, hence, taking into consideration object relationships and avoiding redundancies, it was a big task to smoothly migrate to MS-SQL. The challenge was to understand and enhance database design and also generate data according to reporting and analytical needs.

## BIZDataPro Solution

BIZDataPro designed a robust database design and developed a Business Intelligence Reporting Solution for the customer which helped them in doing effective Data Analytics. The solution covered following features:

- **Consolidated Faculty Performance Analysis**
  - Visualization of current and historical performance of faculty for a particular Course of category.
  - Statistics for achievement of exam in percentage comparing to goal limit for category of courses in tabular format
  - Comparison of performance of supplemental exams in each semester for set of courses.
- **Forecasting California Bar Exam passer Rate based on historical data with estimated goal**
  - Five year's comparison statistics considering graduates, first timer and repeaters in specific exam attempt.
  - Identify/Forecast no. of students mandatory to pass to achieve school's estimated goal.
  - Forecasting Repeat takers in exam.
- **School Course Catalog Requirement with student enrollment details**
  - Shows student course requirement mandatory/non-mandatory pattern with units based on student's admit semester
  - Visualize student count who had enrolled for course/pattern and pending to complete.
  - Shows academic support requirement (Advisement Meetings, Workshop)
- **School Performance Analysis for California Bar Exam with other schools**
  - Visualization of first timer pass rates in exam comparison with other schools in different formats (percentage and decimals).
  - Chart showing overall first timer pass rate of law school between semester range
  - Shows academic support requirement (Advisement Meetings, Workshop)

**Technical Implementation**

- Re-structure database design
- Migration of data from MS-Access and other 3rd party software into MS-SQL
- Customize jasper chart solution to have data point information
- Complex Sub-Reporting (30 pages comparison report)
- Report output in multiple sheets while Export to excel

**Tools and Technologies**

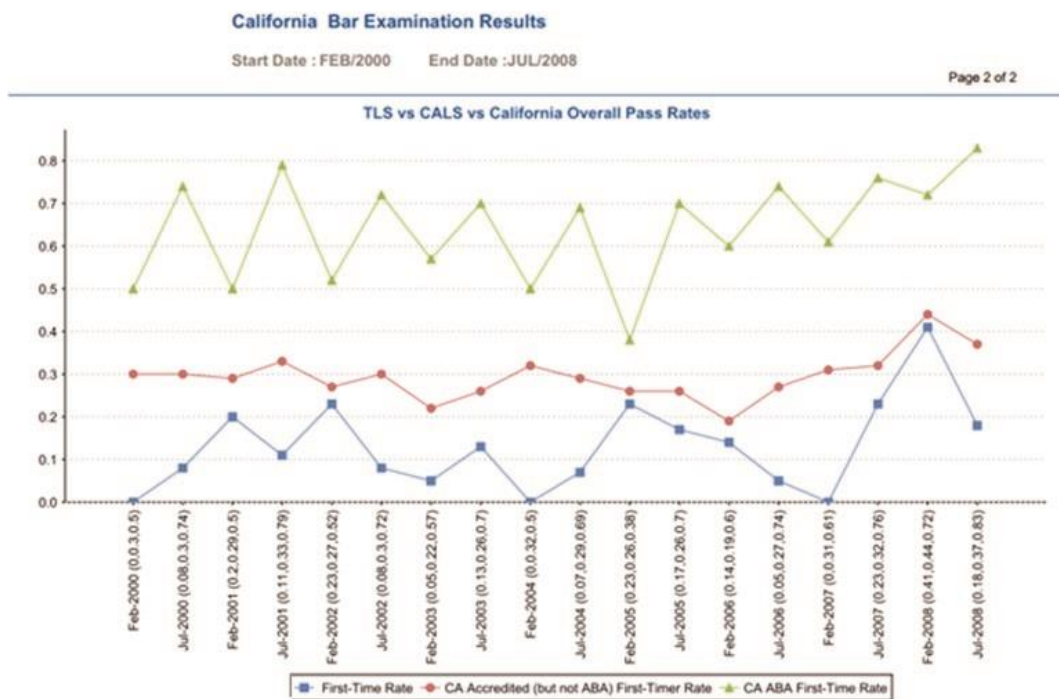
- Jasper Studio Community Edition, MS SQL Server 2008

**Business Benefits**

BIZDataPro's successful implementation of BI Reporting Solution helped the law school in its key decisions and make admin functions more efficient. It benefitted them in the following ways:

- Strong analytical data representation in a clear way from the large set of historical data.
- Aids in decision making of course or syllabus pattern for school based on student's enrollment.
- Rich Data Visualization to help in identifying performing and non-performing students/faculties.
- Predicting/Forecasting students - first/repeat passer rate for competitive exams

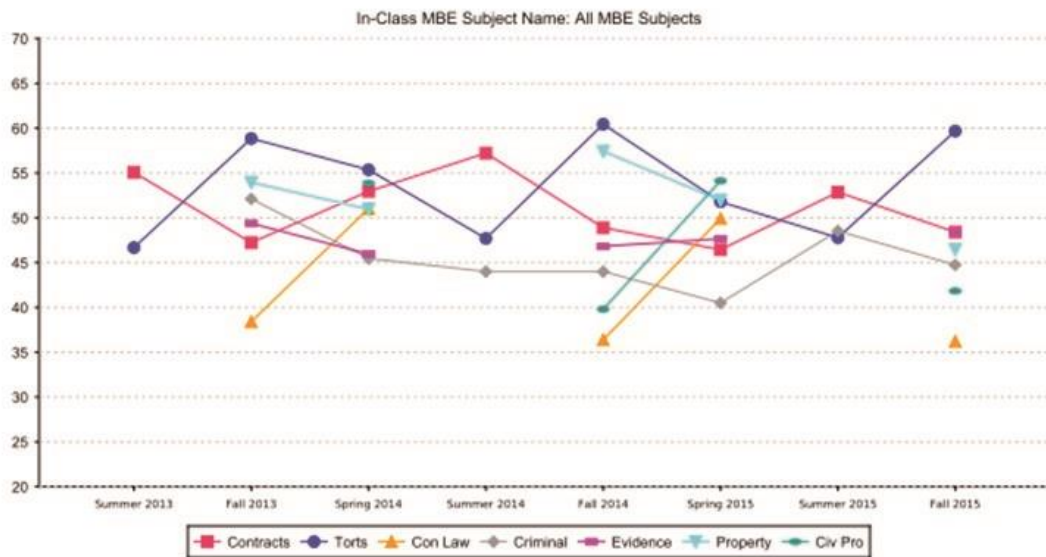
**System GUI Screens**



**IN-CLASS MBE DIAGNOSTIC  
CONSOLIDATED STUDENT PERFORMANCE RESULTS  
FALL 2015 - TORTS**

Fall 2015 Torts, John Ribero			Fall 2015 All Torts Courses			Historical Performance Torts			Historical Performance Torts, John Ribero		
MBE Score (15 Questions)	Head Count	% of class	MBE Score (15 Questions)	Head Count	% of class	MBE Score (15 Questions)	Head Count	% of class	MBE Score (15 Questions)	Head Count	% of class
0-9%	0	0%	0-9%	0	0%	70-79%	35	12%	0-9%	0	0%
10-19%	0	0%	10-19%	0	0%	Perfect Score	1	0%	10-19%	3	2%
20-29%	2	5%	20-29%	2	4%	0-9%	1	0%	20-29%	11	6%
30-39%	1	2%	30-39%	1	2%	80-89%	23	8%	30-39%	10	5%
40-49%	10	25%	40-49%	11	22%	60-69%	74	26%	40-49%	52	28%
50-59%	6	15%	50-59%	6	12%	30-39%	14	5%	50-59%	31	17%
60-69%	12	30%	60-69%	15	31%	10-19%	3	1%	60-69%	47	25%
70-79%	3	8%	70-79%	6	12%	20-29%	16	6%	70-79%	17	9%
80-89%	5	12%	80-89%	7	14%	90-99%	1	0%	80-89%	13	7%
90-99%	1	2%	90-99%	1	2%	50-59%	45	16%	90-99%	1	1%
Perfect Score	0	0%	Perfect Score	0	0%	40-49%	74	26%	Perfect Score	0	0%
Total	40	-	Total	49	-	Total	287	-	Total	185	-
Students scoring 70% or higher :	21	52%	Students scoring 70% or higher :	29	59%	Students scoring 70% or higher :	134	47%	Students scoring 70% or higher :	78	42%

**TREND ANALYSIS BY MBE SUBJECT: LINE GRAPH**



**In-Class MBE Subject Average Data**

Year	Contracts	Torts	Con Law	Criminal	Evidence	Property	Civ Pro
Summer 2013	55%	47%	No Score	No Score	No Score	No Score	No Score
Fall 2013	47%	59%	38%	52%	49%	54%	No Score
Spring 2014	53%	56%	51%	45%	46%	51%	54%
Summer 2014	57%	48%	No Score	44%	No Score	No Score	No Score
Fall 2014	49%	60%	36%	44%	47%	57%	40%
Spring 2015	46%	52%	50%	41%	48%	52%	54%
Summer 2015	53%	48%	No Score	49%	No Score	No Score	No Score
Fall 2015	48%	60%	36%	45%	48%	46%	42%

### MPR Flexible Forecasting

Graduation Range AUG 2009 to JUL 2014 (Bar First Taken FEB 2010 to FEB 2015)				Alumni Range Falling from Pool				Graduation Range Aug 2010 to Jul 2015 (Bar First Taken Feb 2011 to Feb 2016)			
	Pool	Passers	Rate		Pool	Passers	Rate		Pool	Passers	Rate
Aug 2009	4	1		Aug 2009	4	1		Aug 2010	1	1	
Dec 2009	16	11		Dec 2009	16	11		Dec 2010	9	7	
<b>*B</b> May 2010	18	7		May 2010	18	7		May 2011	14	6	
Aug 2010	1	1		<b>Total</b>	<b>-38</b>	<b>-19</b>	<b>50%</b>	Aug 2011	3	0 <sup>-1</sup>	
Dec 2010	9	7		<b>Remaining Pool</b>	<b>162</b>	<b>70</b>	<b>43.2%</b>	Dec 2011	12	9	
May 2011	14	6		<b>Actual Alumni Range Added To Pool (Bar First Taken Feb 2011 to Feb 2016)</b>				May 2012	19	7 <sup>-1</sup>	
Aug 2011	3	1						Aug 2012	5	1	
Dec 2011	12	9						Dec 2012	12	6	
May 2012	19	8						May 2013	28	12 <sup>+2</sup>	
Aug 2012	5	1						Aug 2013	9	4	
Dec 2012	12	6						Dec 2013	12	7	
May 2013	28	10						May 2014	39 <sup>+1</sup>	12 <sup>+2</sup>	
Aug 2013	9	4						Aug 2014	7	2	
Dec 2013	12	7						Dec 2014	15	4	
May 2014	38	10						<b>*A</b> May 2015	32	5	
<b>Total</b>	<b>200</b>	<b>89</b>	<b>44.5%</b>					<b>* Total</b>	<b>217</b>	<b>83</b>	<b>38.2%</b>
				<b>Current Baseline Before Forecast</b>	<b>216</b>	<b>81</b>	<b>37.5%</b>				

\* The State Bar of California Bar Exam Results for July are released late November. A common data request is the rolling 5 year average at the time of the results. You can determine this rate by the following:

- Step 1: See the total pool and passers as labeled with a \*
- Step 2: Subtract data from \*A
- Step 3: Add \*B.
- Step 4: This will provide one with the new total pool and passers. Passers divided by Pool = rate