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Prediction Project
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Colleges and Universities spend a lot of money marketing and promoting their institutions to prospective students. On top of many visits to college fairs, lots of beautifully colored brochures, preview days, campus tours, high school visits and college visits, what is most important is whether or not the institution is going to meet its predictions on enrollment numbers. With the cost of tuition steadily on the rise, the increase in college student loan-debt, and fewer and fewer college high school students graduating from college each year, makes every single student's enrollment that much more important to an institution. For small liberal arts institutions like Maryville College where the bottom line is extremely important because 45% of the college's revenue comes from tuition dollars and fees, targeting students and spending resources on students that will ultimately choose to attend Maryville College is important.

College enrollment officers make predictions every year about which students are most likely to attend an institution and they look at many variables to make those predictions. Predictive modeling offers statistical analysis of previous behaviors based upon important variables that are a part of the current student population at an institution. Charles Ramos, of Ruffalo Noel Levits, a national company on helping higher education institutions refine their enrollment processes, states that predictive modeling can be used to examine characteristics from current students, match it up against the prospective students and give them an average on whether or not they will be likely to enroll in the institution. Using these numbers, according to Ramos allows institutions to:

- 1) Enhance marketing recruitment and communication strategies
- 2) Identify which students the institution should target based upon prediction modeling averages
- 3) Help identify and manage travel and territory management for admissions representatives and
- 4) Allow enrollment managers to use average scores from prediction modeling to target high schools where the institution will have the best possible area of success (Ramos).

Furthermore, using predictive modeling allows institutions to be more conservative and make more educated decisions about their prospective students. Institutions spend lots of money on view books, attending college fairs, sending college swag to prospective students and communicating and sending other mailings to them. If the institution knew that prospective students scored lowly on the predictive model, an institution can choose not to spend time, energy and resources on that student, instead using those resources on students that are more likely to attend an institution.

Looking at Maryville College’s enrollment over the past few years and using trend extrapolation (taking the average) over a period of time, enrollment predictions can be made about the status of the Fall 2014/Spring 2015 year based upon IPEDs data below:

Year	Enrollment	# of Change from Previous Year	Percent Change from Previous Year
2009-2010	1,148	N/A	N/A
2010-2011	1,133	-15	- 1.3%
2011-2012	1,117	- 16	-1.4%
2012-2013	1,111	- 6	-.54
2013-2014	1,130	+19	+1.7
2014-2015	1128	- 2	-.18

Based upon predictions from previous IPEDs data over the past 5 years, enrollment has drop by -1.57% from 2009 to 2014 which will be important information to note as Maryville College makes plans for expenses, facility renovations, building expenses, and preparing a budget that will ensure Maryville College stays on track financially. So based upon the 2013-2014

Other variables can be used to look at enrollment predictions, which make the predictions formula much more complicated. For instance, one major trend in higher education is the number of high school seniors who are graduating each year.

Based upon two charts produced by data from the National Center for Education Statistics as presented by US News and World Report on February 27th, 2014:

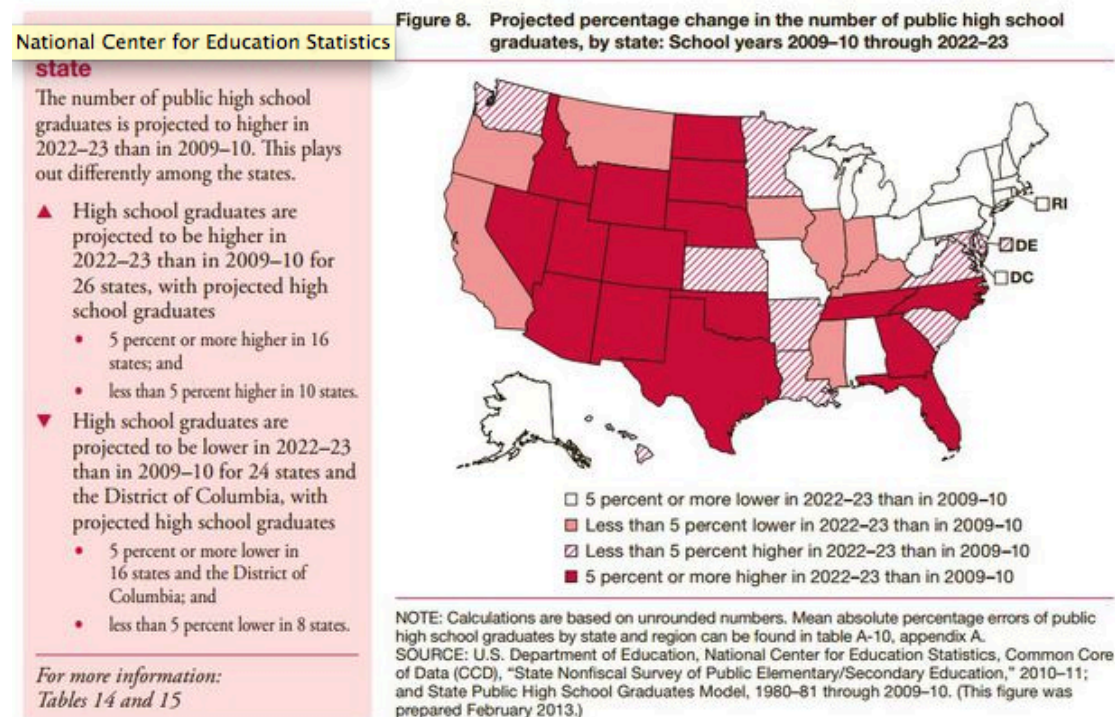
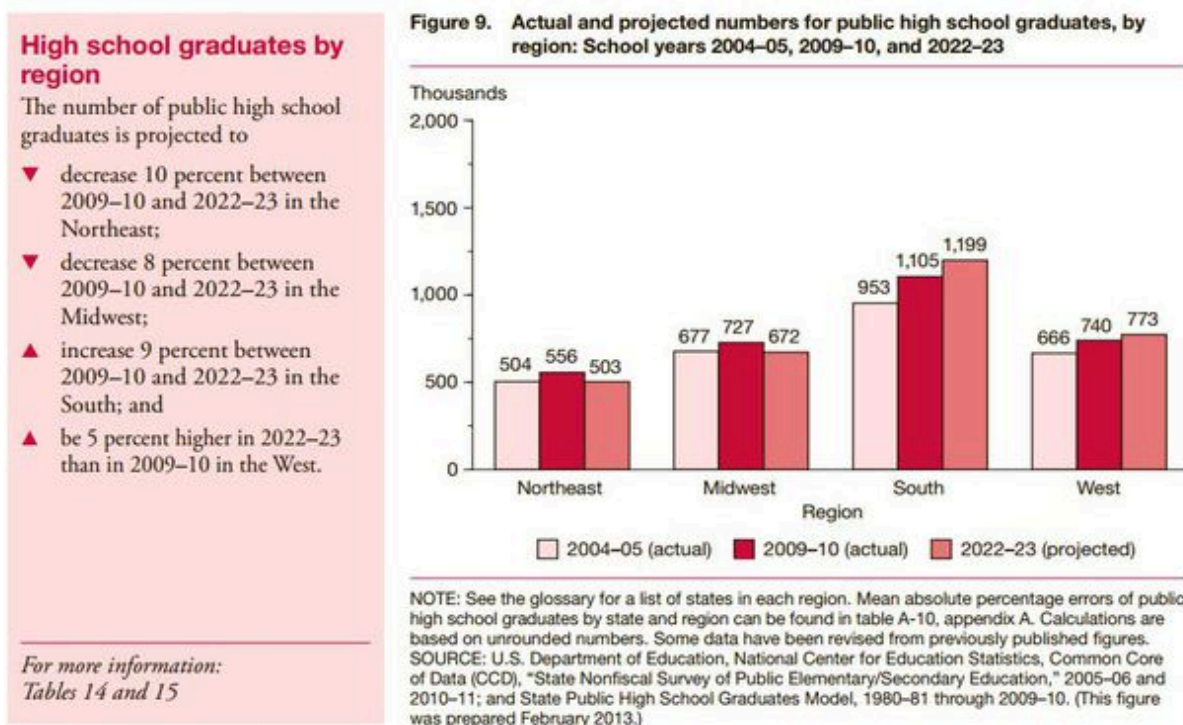


Chart taken from US News and World report. Found: <http://www.usnews.com/news/blogs/data-mine/2014/02/27/1-3-of-states-will-have-fewer-high-school-graduates-by-2022>.

These numbers show that the highest level of increase in high school students by 2022-2023 are in the south with 9% which will be good for Maryville College because Maryville College spends a large amount of time, money, effort and resources recruiting students from among the south. The chart below shows the increase or decrease by region:



This chart is taken from the US News and World Report. Found: <http://www.usnews.com/news/blogs/data-mine/2014/02/27/1-3-of-states-will-have-fewer-high-school-graduates-by-2022>.

Other variables that can play a major role in predicting enrollment is the socio-economic status of the perspective candidate, the current state of the economy, and the students resolve to enroll in school and stay in school.

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Bidwell, Allie. 1/3 of States Will Have Fewer Students by 2022. US News and World Report. Taken from: <http://www.usnews.com/news/blogs/data-mine/2014/02/27/1-3-of-states-will-have-fewer-high-school-graduates-by-2022>

Ramos, Charles. How Predictive modeling benefits enrollment managers. <http://blogem.ruffalonl.com/2013/04/09/predictive-modeling-benefits-enrollment-managers/>