



Data-Driven Support for Students on the Path to College: Identifying useful variables for college planning throughout high schools

Summary of Quantitative Findings:

Investigating the Relationship between High School Curriculum and College Enrollment

The association between high school course taking and postsecondary institution enrollment can be quantified and shared with guidance counselors, students, and parents to provide outcomes-based benchmarks for curricular planning. We extracted data from the Virginia Longitudinal Data System to investigate how course taking during the junior and senior years of high school relates to college enrollments. We examined a cohort of more than 20,000 students who graduated from Virginia high schools in spring 2012 and subsequently enrolled in one of Virginia's 14 most commonly attended colleges and universities. The analysis merged records from the VLDS Student Records and Student Schedule data sets as well as the National Student Clearinghouse Enrollment Records accessible through VLDS. Highlights of the research findings include:

- The Advanced Studies Diploma is attained by most college-bound students in Virginia
 - Over 90% of students in the cohort who attended one of the 14 four-year postsecondary institutions in the sample met the requirements for Virginia's Advanced Studies Diploma
 - Advanced Studies Diploma attainment did not strongly differentiate across categories of institutions designated as Most or More Selective, Selective National, or Selective Regional Universities by U.S. News and World Report
- High school course taking is a strong differentiator of college enrollment
 - Across the four principal subjects we examined (math, English, science, and social studies), there was large variability in course taking across students attending different types of postsecondary institutions, as categorized by the US News and World Report groupings.
 - In mathematics, AP Calculus was nearly seven times more likely to be found in the course enrollment record of a student attending a Most or More Selective University compared to one attending a Selective Regional University.
 - In English, the standard Grade 12 course was found in over 40% of enrollments among students attending a Selective National University but in fewer than 20% of enrollments among students attending a Most or More Selective University
 - In science, Physics I was the most common course taken by high school seniors across Virginia, but AP Physics and AP Biology were more prevalent in the enrollment records of students attending a Most or More Selective University
 - In social studies, of the students attending a Most or More Selective University or a Selective National University, more were enrolled in AP Government & Politics in their senior year than Virginia & U.S. Government.
- Examining combinations and sequences of course taking can provide a more holistic picture of the pathway through high school to college
 - Although high school course taking is highly variable across the Commonwealth, certain combinations of courses emerge as common when examining statewide data.
 - Focusing solely on the four main subjects, we found that 34 distinct combinations of senior-year course taking comprise more than 54% of the study cohort.
 - Analysis of five common combinations of advanced study courses raised potential concerns about the equality of course offerings across school districts in Virginia that requires further investigation.
 - At Virginia's three Most or More Selective Universities, there were 3–27 times as many students who enrolled in one of several "advanced" high school course combinations we identified compared to one more representative of standard senior year courses.