

Post-Secondary Success

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Problem Statement and Research Questions

Schools are failing to prepare students for college and career success, and many students are entering college underprepared for rigorous college-level work. *What are the indicators of college readiness? What strategies can schools use to leverage these data for school improvement and prepare students to be college ready? How can state agencies encourage and support school district data use?*

Literature Review

College and workforce training programs require students to have similar types of knowledge and skills (ACT, 2006). Unfortunately, many matriculating students are underprepared for rigorous college-level work. Adelman (2004) reported that 41% of students who enroll in college are not ready for credit-bearing college-level work, resulting in discouragement, delay, and dropouts. Therefore, it is critical that school districts make efforts to prepare every student for college-level work, with the knowledge and skills necessary to compete in the global economy. These skills and knowledge can be acquired through rigorous courses in high school regardless of whether students are focused on going to college or directly to a career (ACT 2006).

Fellows



Vasuki Rethinam (AF)
 Coordinator of Research



Grace Chesney (AF)
 Chief Academic Officer

Howard County Public School System, MD

Mission: To cultivate a vibrant learning community that prepares students to thrive in a dynamic world

About Us: 76 schools, 8,085 employees, 51,681 students: 44% White, 22% Black, 18% Asian, 9% Hispanic/Latino; 19% Free/Reduced-price Lunch; 9% Special Education

Research Questions:

- What high school factors are significantly related to high school graduates achieving college-ready scores of a 1650 or higher on the SAT or a 24 or higher on the ACT?
- Is there a significant relationship between college readiness and enrollment in a postsecondary institution immediately after high school graduation?
- What strategies are used at the district and school level to apply this research to practice? How can district leaders help schools use data to increase student enrollment in rigorous courses?

Project Scope: HCPSS' **Vision 2018: Fulfilling the Promise of Preparation** places college and career readiness as a primary strategic goal. To understand what indicators predicted college enrollment, we acquired and analyzed college-going data and conducted rigorous statistical models and predictive analytics to understand the high school factors that influenced college readiness and immediate fall college enrollment. Dr. Foose presented this research to all principals in January 2014, and we also conducted data-dive with principals, assistant principals and some central office staff. There is a continuing effort (next 6-12 months) to develop data cultures in schools and knowledge of how to use data to identify students at risk of not meeting the college readiness standards.

Case Studies

Pittsburgh Public Schools, PA

Mission: The Pittsburgh Public Schools will be one of America's premier school districts, student-focused, well-managed, and innovative

About Us: 54 Schools, 3,900 employees, 24,525 students: 54% Black, 34% White, 13% other races; 71% Free/Reduced-price Lunch; 20% Special Education

Research Questions:

- What are the strongest, most actionable indicators of student success in college? What is the best way to share them with teachers, principals, counselors, and students?
- What strategies can schools and districts leverage to improve student GPA and attendance rates and respond to at-risk students in an effective and timely manner?
- What impact does effective teaching have on college readiness?

Project Scope: Since the launch of The Pittsburgh Promise in 2008, PPS has worked to ensure that all students graduate with a 2.5 GPA and 90% attendance rate, allowing them access to the \$40,000/year scholarship offered by the Promise. Our participation in the **College Readiness Indicator System** (CRIS) program has allowed us to focus on researching which data are the strongest predictors of college enrollment and persistence. After a year and a half of data consolidation and cleaning, in the summer of 2013 we provided district and school leadership with key information on the impact of GPA and attendance on post-secondary success. We launched our College Readiness Indicator Reports through the district's new reporting platform, **PPS Insight**, in February of 2014, allowing school staff to access college readiness data on their students in real time.

Ohio Department of Education

About Us: The Ohio Department of Education (ODE) oversees the state's K-12 public education system. ODE includes 1,000+ LEAs, 3,000+ schools, 242,000 teachers and staff, and 1.7 million K-12 students: 74% White, 16% Black, 10% other races; 47% Economically disadvantaged; 15% Special Education

Policy/Research Questions:

- How can the state devise an accountability-based approach to postsecondary readiness that recognizes districts for a diverse array of postsecondary preparation programs?
- How can multiple postsecondary data points be combined into a comprehensive accountability measure?
- What key data points is the state missing and how can we incorporate that data into the system?
- What data tools can the state build and/or provide that will enable districts and the general public to make sense of postsecondary readiness ?

Project Scope: The Ohio Legislature, State Board of Education, and Department of Education all recognize the key role that secondary education plays in supporting college and career readiness. The state also recognizes the diverse approaches districts take toward postsecondary preparation and aims to identify the policy levers that will encourage those approaches that have the greatest impact on Ohio's students. Beginning with **Ohio's 2014 Report Cards**, the state will highlight multiple measures of postsecondary success at the district and school level. In 2015, districts and schools will be graded on the "Prep for Success" measure. In addition, the state will begin reporting on postsecondary outcome measures, the ultimate goal being to paint a comprehensive picture of how districts and schools contribute to students' long term college and workforce outcomes.



Pete Lavorini (AF)
 PM College
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 Data Manager, Policy
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Results and Impact

Howard County Public Schools

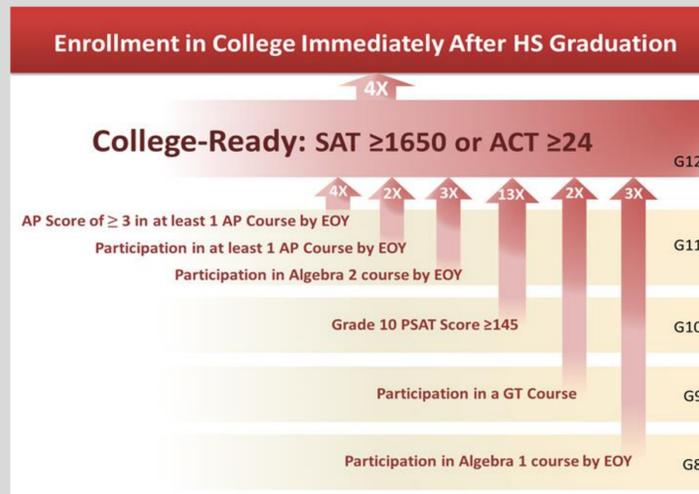


Figure 1. High School Indicators of College Readiness and Fall College Enrollment (in odds ratio)

Of the variables that had a significant relationship to college readiness, scoring 145 or higher on the Grade 10 PSAT was the strongest predictor of college readiness. Other strong predictors of college readiness included scoring a 3 or higher on at least one AP exam by the end of Grade 11, completion of Algebra 1 by the end of Grade 8, completion of Algebra 2 by the end of Grade 11, participation in at least one GT course in Grade 9, and participation in at least one AP course by the end of Grade 11.

For example, students who scored 145 or higher on the PSAT during Grade 10 were 13 times more likely to be college ready than students who scored less than 145 on PSAT in Grade 10. Additionally, graduates who were college ready (scoring SAT 1650 or higher or ACT 24 or higher) were 4 times more likely to enroll in college immediately after high school.

To apply this research to practice, Dr. Foose presented this research to school principals and assistant principals. Data-dive meetings conducted by the Research Office were also used to guide principals on how to use data to understand the math pathways for students in elementary, middle and high schools.

Pittsburgh Public Schools

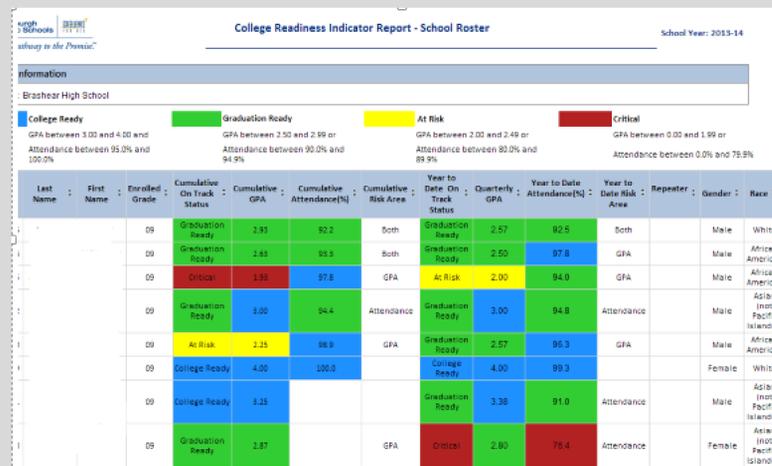


Figure 2. College Readiness Indicator Report: School Roster

The **College Readiness Indicator Report: School Roster** identifies students considered to be College Ready (achieving a 3.0 GPA and maintaining 95% attendance), Graduation Ready (a 2.5 GPA and 90% attendance), At-Risk (a 2.0 GPA and 80% attendance), or Critical (less than a 2.0 GPA and/or attendance below 80%). These thresholds were determined by comparing the on-time graduation, seamless enrollment, and persistence rates of first time 9th graders in 2005 through 2008. There is currently an almost equal distribution of students across the four categories.

This report provides principals and counselors the ability to sort, filter, and group students based on a number of student attributes, including their college readiness status. The complimentary Teacher Roster provides teachers with the statuses of the students that they teach and is sortable by course and period taught. School leaders will use these reports to inform school improvement plans for SY 2014-15.

Ohio Department of Education

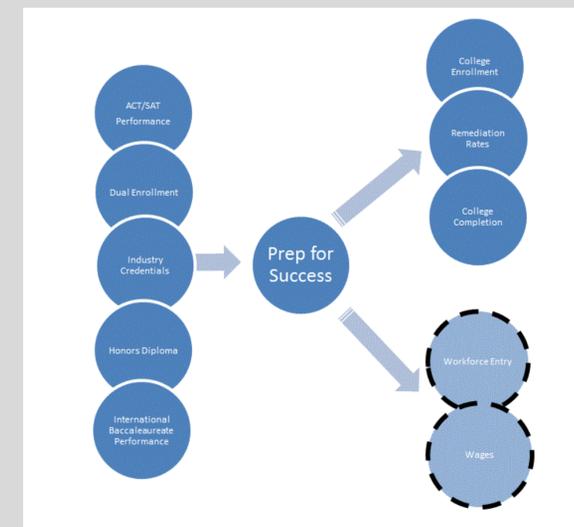


Figure 3. Ohio's Report Cards Connect Postsecondary Readiness Inputs and Outputs

The graded **Prep for Success** measure that Ohio will include on the 2015 Report Cards will incorporate ACT/SAT, Dual Enrollment, Industry Credentials, Honors Diplomas, Advanced Placement, and International Baccalaureate Program data.

By including these measures as part of Prep for Success, the state is signaling its belief that these measures positively impact student success after secondary school.

With the completion of Ohio's state longitudinal data system, we will ultimately be able to assess the impact of each of these variables on students' college enrollment, remediation, and completion rates. Future cross-agency connections may allow us to measure the impact on workforce success.

Lessons Learned

School staff were excited about getting data for their schools, but in some cases, lacked the skills to appropriately use the information. Skill levels varied in terms of: manipulating data, capacity for analysis, and engaging with the data at deeper level.

Further Analyses

College readiness does not happen only in high school - it is a K-12 process. Further analyses will look to identify indicators of **college readiness** for middle and elementary school students.

Impact of the Work

School administrators are asking for more data, including historic student achievement information. PPS, HCPSS, and ODE are also working to support school staff on programmatic responses to the indicators.

Next Steps

HCPSS & PPS: We will encourage and support data discussions in the central office as well as schools, build capacity for understanding data and using data in decision making processes, and identify interventions or programs that have the greatest impact on improving student achievement.

ODE: Having established our postsecondary measures, our next task is to determine how best to present this data and accompanying resources in a way that will be meaningful for educators, parents and students.