

Using College Admission Test Scores to Clarify High School Placement

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About the Leading Indicator Spotlight series of research briefs

Improving student outcomes and closing achievement gaps takes time – more time than is often allowed in typical big-city political environments. Education leaders and community members need a way to monitor how much – if any – progress is being made in their schools and school systems *before* the results show up in indicators like student test scores, when it is often too late to intervene effectively.

Leading indicators that signal early progress toward academic achievement allow education leaders, especially at the district central office level, to make decisions about supporting student learning that are less reactive and more strategic. The concept of leading indicators builds on existing efforts by school districts to use data to inform systemwide decision making.

The report *Beyond Test Scores: Leading Indicators for Education*, published by the Annenberg Institute in 2008, looks at four school districts that are in the vanguard of data-informed decision making. The report examines how these districts – Hamilton County (Chattanooga, Tennessee), Montgomery County (Maryland), Naperville (Illinois), and Philadelphia (Pennsylvania) – are developing and using leading indicators for education.

The Leading Indicator Spotlight series of research briefs is designed to accompany *Beyond Test Scores*. Each brief examines in detail one leading indicator identified in the study and answers the questions:

- Why is this indicator useful for monitoring academic achievement?
- How do school districts measure this indicator?
- How can districts act on this indicator for intervention and reform?

About the Author

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Introduction

In *Beyond Test Scores: Leading Indicators for Education*, Foley and colleagues (2008) define leading indicators as those that “provide early signals of progress toward academic achievement” (p. 1) and stress that educators “need leading indicators to help them see the direction their efforts are going in and to take corrective action as soon as possible” (p. 3). The authors identify college admission test scores – used innovatively to clarify high school placement – as one leading indicator commonly used by school districts. This brief in the Leading Indicator Spotlight series will outline why college admission test scores are useful as a leading indicator for high school placement, how this indicator is measured by school districts, and how districts can put data about this indicator into action for intervention and reform.

Why use college admission test scores as a leading indicator to clarify high school placement?

Individuals with a bachelor’s degree earn about 75 percent more annually than those with a high school diploma but no college experience... [and] higher levels of education are also associated with greater social mobility and access to a middle-class standard of living.

– *Thad Nodine*, *Innovations in College Readiness*

A college degree dramatically expands lifetime opportunities. Many supports and challenges, both inside and outside of school, assist and hinder students as they attempt to gain access

to and succeed in the postsecondary world; research has shown that one of the most important is the level or rigor of students’ high school curricula (Adelman 2006; Data Quality Campaign 2008; National Science Board 2004; Nodine 2009; Wakelyn 2009). In a report for the U.S. Department of Education, Adelman (2006) highlights that “the academic intensity of the student’s high school curriculum still counts more than anything else in precollegiate history in providing momentum toward completing a bachelor’s degree” (p. xviii).

But access to high-level coursework has not been equal for all students. Using college admissions has the potential to expand access to challenging coursework and put students on a path toward college and lifetime success. Thus, college admissions test scores are an important leading indicator in an educator’s array of tools.

Unequal access to advanced courses

Hundreds of thousands of students have the ability, but lack the opportunity, to take and succeed in AP courses.

– *David Wakelyn*, *Raising Rigor, Getting Results*

Many studies have documented the unequal access to advanced coursework in U.S. high schools and the underrepresentation of low-income and minority students in those classes (College Board 2002; Flug, Musen & Sands 2008; Handwerk et al. 2008; JBHE Foundation 2005; Klopfenstein 2004; Mapp, Thomas & Clayton 2006; Nodine 2009; USDOE 2007;

Wakelyn 2009). The National Center for Education Statistics found that in 2005 “for more than a quarter of U.S. high school students, there were no advanced courses available at their home school” (USDOE 2007, p. 4).

Focusing more specifically on Advanced Placement (AP) courses, Handwerk and colleagues (2008) highlight these lower levels of participation, citing that

10.3 percent of Asian American, 5.3 percent of White, 2.4 percent of Hispanic, and 0.5 percent of African American students took an AP exam [in the 2003-2004 school year, as did]... less than 1 percent of low-income students. (p. 4)

Schools and school districts that use college admission test scores as a leading indicator to identify additional students who could be challenged by and succeed in advanced courses have been able to increase their numbers of underrepresented students (CELL 2009; College Board 2002; Hechinger 2009; Mapp, Thomas & Clayton 2006; Hislop et al. 2006; Wakelyn 2009). Thus, this indicator can help to close the achievement gap and to support educators and administrators in their quest to “advocat[e] for equity,” a common goal Foley and colleagues (2008) discovered in the districts they researched in *Beyond Test Scores* (p. 15).

Advantages of using admissions test scores as a leading indicator

Unlike some other leading indicators, this indicator searches for the positives in students’ records and helps look at their future paths from an asset-based perspective. Rather than noting challenges or predicting difficulties, the use of test scores to advance students aims to identify their untapped potential. Although both positive and early warning types of indicators are crucial, it is refreshing to see a focus on advancement and students’ positive accomplishments.

College admission tests are also established and have clearly defined scores, and they are more easily tracked than other “harder-to-quantify indicators” (Foley et al. 2008, p. 7). As noted in the next section, questions exist about the tests’ accessibility and bias, but their scores are a readily available source of information that can be used in an immediate way to support students.

How are college admission test scores measured?

Tests given in eleventh and twelfth grade

Most U.S. high school students preparing for the college admissions process take the Scholastic Aptitude Test (SAT) I Reasoning Test, the ACT test, or both in eleventh and twelfth grades.

The SAT, administered by the College Board, covers reading, writing, and math and “measures what you have learned in school and how well you can apply that knowledge. It assesses how well you analyze and solve problems.” Many high school students also take the SAT subject tests, which focus more specifically on individual subjects (College Board 2009c).

ACT is a curriculum-based multiple-choice exam that “assesses high school students’ general educational development and their ability to complete college-level work” through sections covering English, math, reading, and science, as well as an optional writing test (ACT 2009c).

Tests given in tenth grade

The tenth-grade tests that precede the SAT and ACT, because of their earlier administration, appear to be the most widely used as a leading indicator for schools and districts in placing high school students in advanced courses. Similar to the SAT, the Preliminary SAT (PSAT)

measures “critical reading skills, math problem-solving skills, and writing skills”; it helps prepare students for the SAT, allows students to be considered for National Merit Scholarships, and can be used to help students plan for college and careers (College Board 2009b). PLAN, a “pre-ACT” test, covers material similar to the ACT’s English, math, reading, and science sections and also collects information on student coursework, needs, and college and career interests (ACT 2009b).

Interventions and reform: How can districts put data into action?

Scores on college admission exams are no longer being used solely to make students attractive to colleges or to determine scholarship opportunities. The impetus is coming from many directions to use these test scores as a way to support the advancement of student coursework and the expansion of access to rigorous classes such as AP courses, dual enrollment classes, honors courses, and other challenging academic opportunities.¹ Schools and school districts, groups such as the National Governors Association (NGA), and test companies themselves are working alongside other organizations to use this indicator in innovative ways.

At the student level, these scores are being used to advance individuals, but they are also beginning to be employed at the school and system level. Among schools and districts that have successfully used this leading indicator, their work has not only been about discovering and advancing students, it has also been about preparing and supporting students, their teachers, and their schools.

Using admissions tests for advanced coursework placements

ACT, Inc., and the College Board have developed systems to help schools and districts in identifying and advancing students who perform well on their tenth-grade tests. With PLAN, ACT’s Educational Planning and Assessment System (EPAS) guides students and schools to an understanding of test-takers’ present scores and future capabilities (ACT 2009a). In its most recent study showing “moderate to strong correlations . . . between PLAN and AP scores,” ACT advises schools to employ this information to

provide inquiring students and their parents with information regarding their likelihood of success on an AP exam, identify students who should take additional preparatory coursework prior to taking an AP course, and determine the number of students who might be eligible for an upcoming AP course. (ACT 2009d, p. 2, 4)

The College Board, along with NGA’s Center for Best Practices, developed a system called AP Potential, where schools can sort through the PSAT scores of their students and develop lists of those who might do well in advanced coursework (College Board 2009d; Wakelyn 2009).

They describe AP Potential as a

free, Web-based tool that allows schools to generate rosters of students who are likely to score a 3 or better on a given AP exam . . . designed to help you increase access to AP and to ensure that no student who has the chance of succeeding in AP is overlooked. (College Board 2009d, paragraph 1)

¹ For an official definition of “advanced course work,” see U.S. DOE (2007), p. 3–4. This Leading Indicators Spotlight brief uses the terms *advanced*, *challenging*, and *rigorous coursework or classes* interchangeably to describe AP classes, dual enrollment courses, honors courses, and other such opportunities (see sidebar on next page).

ADVANCED COURSEWORK OPTIONS

Administered by the College Board, Advanced Placement (AP) courses are college-level courses offered during high school in over thirty subjects that culminate in a nationally administered exam (College Board 2009a). According to Wakelyn (2009), the AP program “is the nation’s oldest example of a rigorous, common curriculum. Students who score well on AP exams are more likely to persist in college and earn a degree” (p. 1).

Many institutions of higher education allow students to accumulate credit for AP courses taken in high school or to pass out of introductory-level courses if they receive a passing score or above on an AP exam. Because of the AP program’s ability to provide a challenging high school experience, ability to demonstrate advanced skills and motivation to colleges, potential to allow students to accumulate college credit, and potential to predict college persistence and success, many institutions and individuals within and outside of school districts are pushing to expand access to these courses (Adelman 2006; College Board 2002; Data Quality Campaign 2008; Handwerk et al. 2008; JBHE Foundation 2005; Klopfenstein 2004; Mapp, Thomas & Clayton 2006; USDOE 2007; USDOE, n.d.; Hislop et al. 2006; Wakelyn 2009).

Dual, or concurrent, enrollment refers to a broad array of courses that allow students to take college classes and accumulate both college and high school credit through partnerships with institutions of higher education. These classes might take place on a college campus as a part of usual course offerings or as a part of a specially designed program, or they might take place at the high school itself, with assistance and monitoring from the partnering institution. According to Karp and colleagues, as of 2006, policies supporting dual enrollment existed in forty-two states across the country, and programs have been expanding over the last several years (Flug, Musen & Sands 2008, p. 2).

In advance of and alongside these systems, some school districts have developed their own data systems for using scores as a leading indicator in this way. In 2005, for example, the Montgomery County Public Schools (MCPS), began to use its “M-Stat” system as a way of “removing institutional barriers for African Americans and Hispanics . . . [with an initial] focus on PSAT participation and advanced course enrollment” and developed an Honors/AP Potential Identification Tool (Mapp, Thomas & Clayton 2006, p. 4–6). As with other states that have begun to use this indicator, their success in expanding the number and percentage of African American and Hispanic students taking APs was a direct result of these efforts (CELL 2009; Data Quality Campaign 2008; Mapp, Thomas & Clayton 2006; Hechinger 2009; Wakelyn 2009).

In some districts, these endeavors have required students scoring well on tests to take advanced classes, while in others, the policies support expansion and uncover potential students, rather than requiring enrollment (Wakelyn 2009, p. 6). The potential for discovering qualified students and advancing their coursework is huge. According to the NGA Center,

Nationally, 600,000 students have PSAT scores that indicate they would be likely to succeed in AP Calculus and AP English Literature, if only they had the opportunity to access these courses. (Wakelyn 2009, p.10)

Using college admission test scores in other innovative ways

The Data Quality Campaign (2008) highlights a wide range of ways that states and schools are using these scores, in addition to use for advanced coursework placements: placing students in college remediation programs (Florida); and as indicators of overall school quality and warning signs of which schools and districts might require additional interventions (Georgia and Texas).

Some districts have used performance on preliminary exams to shape their course offerings and to expand the number and range of available AP courses in certain schools (Millsap & Camara 1998; Wakelyn 2009). Many institutions of higher education use PSAT, SAT, or other exam scores as criteria for eligibility for dual enrollment. Although most of the available literature discusses advancement of students into honors and AP courses within their high school, there is the potential for schools and districts to also use college admission exam scores to target students who could qualify for concurrent enrollment and expand those programs.

Supports for students, teachers, schools, and districts: Lessons from successful programs

Sites using college admission test scores to clarify high school placements also work to prepare and provide additional support to students, teachers, schools, and districts, with additional assistance coming from expanded funding opportunities and incentive structures. This focus on necessary supports has been documented by the College Board (2002), the NGA Center's Advanced Placement Expansion project (Wakelyn 2009), and Jobs for the Future and the Bill & Melinda Gates Foundation's Early College High School Initiative (Nodine 2009).

Schools and districts cannot meaningfully expand access to rigorous coursework without paving the way and expanding assistance for larger numbers and previously underrepresented groups of students. (College Board 2002; Data Quality Campaign 2008; Mapp, Thomas & Clayton 2006; Nodine 2009; Riegle-Crumb, Farkas & Muller 2006; Wakelyn 2009)

Academic and social supports for students

Academic student support has taken shape in a number of different ways across sites piloting the use of this leading indicator. Summer academies, additional tutoring, assistance with study skills, alterations to course content, and other tools have been provided to students both in advance of and during their enrollment in more challenging courses (College Board 2002; Nodine 2009; Wakelyn 2009).

Along with academic supports, additional attention has also been paid to social networks and supports. According to Wakelyn (2009), schools have promoted peer support networks, enrolled groupings of minority students, and offered mentors who are representative of target students (Mapp, Thomas & Clayton 2006; Riegle-Crumb, Farkas & Muller 2006; Wakelyn 2009).

Professional development and support for teachers

Teachers sometimes fear that expanded access will mean a lack of preparation among students or a more difficult teaching experience (Wakelyn 2009, p. 7). The NGA Center's pilot sites instituted a range of teacher supports in Nevada, Wisconsin, Kentucky, Alabama, Maine, Georgia, and Wisconsin (Wakelyn 2009). Some sites offered additional training around diversity goals and policies, teacher expectations, and holding high standards for all students, a concept that was instituted at the school level as well (Mapp, Thomas & Clayton 2006; Nodine 2009; Wakelyn 2009). In addition, those using this indicator focused at the school and district levels on curricular alignment, establishing a "culture of high expectations" (Wakelyn 2009, p. 9), clarifying leadership, developing data systems, and aligning middle and high school curricula (Nodine 2009; Wakelyn 2009).

Online and off-site support

In schools where demand is not high enough to staff an entire AP class, options exist for remote instruction. According to Wakelyn (2009), among the NGA Center's pilot sites,

Alabama, Kentucky, and Nevada used virtual learning technology to greatly expand AP in rural areas. Schools in these states have an especially hard time attracting highly qualified science teachers . . . [but] using virtual AP teachers enabled these schools to pool their students efficiently across the state. (p. 6)

The U.S. Department of Education's Office of Innovation and Improvement published a guide in 2007 that highlights the growth in this area and offers specific examples of providers in various states.

Monetary assistance and incentives for students and teachers

Funding to reduce test-taking fees for students, particularly low-income students, is available from institutions such as the College Board (2009e), as well as from some state entities. In Indiana, for example, the state department of education "provides funding for all tenth-graders at public schools and accredited private schools to take the PSAT" (CELL 2009, paragraph 3). Other financial assistance has been available through the U.S. Department of Education's Advanced Placement Incentive Program Grants (USDOE n.d.; Wakelyn 2009).

Some schools and districts have offered stipends or honorariums to teachers who take on these expanded classes (Wakelyn 2009). Others have offered students cash, scholarships, automatic grade increases, or the potential to "opt out of state end-of-course exams" in exchange for enrollment and good performance in more challenging classes (Wakelyn 2009, p. 7-12).

Limits of this indicator

Those seeking to use this indicator must consider its limitations.

College admission test scores should not be seen as the only source of information for determining course eligibility.

In the literature on using these exams to advance students, all parties, including the testing companies, are careful about warning schools and districts to use a range of sources of information for determining eligibility for advanced coursework (ACT 2009d; College Board 2009d; Mapp, Thomas & Clayton 2006; Palin 2001). Montgomery County, for example, looks at "enrollment in other honors courses, academic performance, attendance, [and] interests, motivation, and recommendations" (Hislop et al. 2006, slide 30). Ruling out students who express interest in advanced courses based on low test scores is expressly advised against; on its Web site describing the AP Potential tool, the College Board (2009d) writes,

AP Potential should never be used to discourage a motivated student from registering for an AP course, since the AP Potential results only account for some of the factors that contribute to the students' exam results and do not take into account the power of an individual student's motivation, parental support, and teacher efficacy. (paragraph 3)

Success in certain subjects is not well predicted by these exams.

Another challenge stems from these tests' limited ability to predict success in certain advanced courses. Millsap and Camara (1998), for example, provide evidence that "performance on the PSAT/NMSQT is not strongly related to AP grades on four examinations: (1) studio art: design, (2) studio art: drawing, (3) German language, and (4) Spanish language" (p. 22). For advanced courses in less traditional subjects or subjects not covered on college

admission tests, their usefulness as an indicator in determining course placement may be very low.

If students do poorly in advanced classes, their usefulness is limited.

In focusing on access to advanced coursework, sometimes schools and districts forget to keep in mind how students actually fare in those classes. As Handwerk and colleagues point out in the 2008 report *Access to Success: Patterns of Advanced Placement Participation in U.S. High Schools*,

Overall, a median of 2.4 percent of public high school students earned a grade of 3 or better on at least one AP exam [in 2003-2004]. . . . While 85 percent of public high school students attend schools that offer AP exams, few students participate in the program by taking exams, and even fewer score high enough to earn college credit or placement. (p. 4)

If a major benefit of these advanced classes is the credit they can provide in college, but students are not qualifying for that credit; and if another major benefit is the challenging content and experience of these courses, but students are not succeeding in them; then additional attention must be paid to *performance* in advanced courses, not only to students' *access* to them.

Looking to the future

The Data Quality Campaign (2008) highlights the importance of longitudinal data systems and argues that these scores must be linked with other crucial education data. As systems are developed and implemented for tracking test scores for the purposes laid out in this brief, educators must keep in mind their potential use for other purposes and the compatibility of their information with other systems. Once tools are

developed for tracking test scores, they may be usable for other data, such as test registration. Maryland, for example, uses SAT registration information to encourage unregistered students to sign up for the exam before it is too late. The more connections that are made among the various pieces of information collected about students, schools, and districts, the better educators will be able to serve their students and improve.

In addition to the use highlighted here, that of advancing the level of students' high school coursework, college admission test scores are also used to award scholarships and tuition waivers, determine remediation in college, and target support to or chastise schools and districts (Data Quality Campaign 2008). As these exams are employed for other goals, those users should keep in mind the limitations and biases of these tests described in the previous section. Researchers must continue to push for changes that will make them more accessible, representative, and equitable.

Wakelyn (2009) provides one estimate of the possible impact of this leading indicator:

If, during the next five years, governors were to set these goals for their state – a third of all students taking AP courses and a quarter performing at mastery – AP would grow to serve an estimated one million high school seniors in the class of 2014, with 750,000 students scoring at mastery. . . . Meeting these goals would help raise college graduation rates and help maintain the nation's workforce quality and economic competitiveness. (p. 14)

Pursuing the use of this indicator alongside the necessary supports is an exciting and growing way for schools and districts to better serve their students and the nation.

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