# 01010 <br> \section*{STRATEGIC DATA PROJECT} 

## SDP COLLEGE-GOING DIAGNOSTIC

Albuquerque Public Schools
May 2014



## THE STRATEGIC DATA PROJECT (SDP)

Since 2008, SDP has partnered with 75 school districts, charter school networks, state agencies, and nonprofit organizations to bring high-quality research methods and data analysis to bear on strategic management and policy decisions. Our mission is to transform the use of data in education to improve student achievement.

## Part of the Center for Education Policy Research at Harvard University, SDP was formed on two fundamental premises:

1. Policy and management decisions can directly influence schools' and teachers' ability to improve student achievement.
2. Valid and reliable data analysis significantly improves the quality of decision making.

SDP's theory of action is that if we are able to bring together the right people, assemble the right data, and perform the right analysis, we can help leaders make better decisions—ultimately improving student achievement significantly.

## To make this happen, SDP pursues three strategies:

1. Building a network of top-notch data strategists who serve as fellows for two years with our partners (e.g., school district, charter management organization, nonprofit, or state education agency).
2. Conducting rigorous diagnostic analyses of teacher effectiveness and college-going success using agency data.
3. Disseminating our tools, methods, and lessons learned to the education sector broadly.

The project is supported by the Bill \& Melinda Gates Foundation.

## SDP COLLEGE-GOING DIAGNOSTIC

## Introduction and Background

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A few generations ago, a high school diploma opened doors to skilled jobs and middle-class earnings. Today, a college diploma is just as essential. Higher education, whether in the form of a two- or four-year college or a technical program, has become critical to achieving stable employment and financial security. In the face of the new economic reality, it is increasingly important that $\mathrm{K}-12$ educators prepare their students to graduate from high school with the knowledge and skills necessary to enroll in, persist at, and complete higher education.

Parental expectations reflect the growing importance of higher education for career readiness. Nationwide, nine out of 10 students in Grades 6 through 12 have parents who expect them to continue their education beyond high school (Lippman et al, 2008). In addition, according to a recent national Gallup survey, approximately $60 \%$ of parents agree that their children need to complete postsecondary education to earn more money and pursue their desired career (Sallie Mae \& Gallup, 2010, p. 48).

Given these patterns, we at the Strategic Data Project designed a set of analyses called the SDP College-Going Diagnostic as a means to:

1. inform leaders of school districts and state education agencies about the college-going outcomes of their students, and
2. identify potential areas for action to increase students' levels of academic achievement, preparedness for college, and postsecondary attainment.

The College-Going Diagnostic, summarized in this report, is a partnership between SDP and the Albuquerque Public Schools (APS) to bring data to bear on policy and management decisions. It is neither an exhaustive set of analyses, nor a compilation of recommendations for the district to consider. Rather, the diagnostic is a collection of analyses that can help the district better understand its past performance, set future goals, and plan responses strategically. Additionally, the diagnostic is meant to demonstrate more broadly how education agencies can capitalize on existing data to inform decision making.

This report examines APS students' high school performance, college enrollment, and college persistence patterns and compares these patterns across a variety of student characteristics and academic experiences. To conduct the analyses, researchers connected APS administrative student data lincluding demographics and test scores) to college enrollment records and to student surveys conducted by SDP Data Fellows at several APS high schools. These data sources allowed the diagnostic to track students' progress through high school to graduation and to examine their college-going aspirations and actual college outcomes. The analyses of high school graduation rates and patterns focus on the cohorts of students who entered ninth grade in 2006-07 and 2007-08-that is, students who would be expected to graduate by 2009-10 and 2010-11, respectively. The analyses of college enrollment and persistence focus on students who completed high school between 2006-07 and 2010-11. Due to data availability limitations, some analyses include only a subset of these cohorts.

The analyses were completed by members of the research team at the Center for Education Policy Research at Harvard University with the support of staff and SDP Fellows at Albuquerque Public Schools.

## SDP COLLEGE-GOING DIAGNOSTIC

## Key Findings

## Section 1. Overall Secondary and Postsecondary Educational Attainment

- One third of APS ninth graders who entered high school in 2006-07 graduated high school within four years, seamlessly enrolled in college, and persisted to their second year of college.
o For every 100 first-time ninth graders who enrolled in an APS high school, 57 graduated high school within four years, 39 seamlessly transitioned to college, and 31 persisted to their second year of college.


## Section 2. On Track to High School Graduation

- Ninth-grade on-track status (based on accumulated course credits) was strongly related to students' high school graduation and college-going outcomes. Students who failed to earn sufficient credits in the ninth grade in 2006-07 were far less likely to graduate on time, to enroll in college, and to persist in college, compared with their on-track peers.
- In 2006-07 and 2007-08, two in five ninth graders in the district fell off track to graduate by the end of their first year in high school.
o The share of students who fell off track to graduate by the end of their first year in high school varied substantially across schools-from more than one half to as few as $15 \%$ of ninth graders.


## Section 3. High School Graduation

- The high school graduation rate in APS was lower than the national average. On average, 57\% of 2006-07 firsttime ninth graders in APS high schools graduated within four years, and another 4\% graduated within five years.
o High school graduation rates varied substantially across APS schools. For example, 81\% of ninth graders at La Cueva High School graduated within four years, compared with 42\% at Highland High School.
- Student achievement prior to high school influenced student outcomes across the entire college-going pathway. Nonetheless, on-time graduation rates of ninth graders in 2006-07 and 2007-08 varied widely across APS high schools, even among students with similar incoming achievement.
o For example, 58\% of students at Cibola and Eldorado with prior achievement in the bottom quartile districtwide graduated on time, compared with fewer than one quarter of similarly low-performing students at Rio Grande.


## Section 4. College Enrollment

- College enrollment in the district between 2006-07 and 2010-11 was slightly lower than the national average but differed substantially across APS high schools.
o On average, two out of three APS graduates enrolled in college seamlessly.
- College enrollment rates for students with similar incoming achievement levels varied substantially across APS high schools.
- Enrollment in college was highly concentrated: Nearly nine in 10 APS graduates who enrolled in college attended one of five colleges.
o Three quarters of graduates enrolling at a four-year college attended the University of New Mexico; 94\% of graduates enrolling at a two-year college attended Central New Mexico Community College.
- According to a 2011-12 survey at three high schools with low average student achievement, the vast majority of students have college aspirations-a figure at odds with the schools' low actual college enrollment rates. Limited information about costs and opportunities for financial support, rather than lack of aspirations, appears to be a major barrier to college enrollment.


## SDP COLLEGE-GOING DIAGNOSTIC

## Analyses: Overall Secondary and Postsecondary Educational Attainment

## Section 1. Overall Secondary and Postsecondary Educational Attainment

This section provides an overview of APS student outcomes across the college-going pathway-from ninth-grade enrollment through second-year college persistence. The analysis tracks the percent of ninth graders who complete high school on time, enroll in college seamlessly (that is, the first fall upon high school graduation), and persist to the second year of college. To examine the range of attainment in the district at each milestone, the highest and the lowest rates of APS high schools are also presented.

As shown in Figure 1, for every 100 first-time ninth graders who enrolled in an APS high school in 2006-07, 57 graduated high school within four years, 39 seamlessly transitioned to college, and 31 persisted to the second year of their postsecondary studies. By comparison, for every 100 ninth graders from the same cohort nationwide, roughly 78 graduate high school within four years, 53 seamlessly enroll in college, and 35 persist to their second year. ${ }^{1}$

While the high school graduation, college enrollment and college persistence rates at APS were all below the national average rates for this cohort, students at individual high schools progressed along the educational pipeline at vastly different rates. At the high school with the highest graduation rate, $81 \%$ of ninth graders graduated on time, compared with $42 \%$ at the high school with the lowest graduation rate. In addition, the school with the highest college enrollment rate sent $67 \%$ of its ninth graders to college -a rate three times as high as that of the school with the lowest college enrollment rate (22\%). Several analyses in this report examine the school-level variation in greater depth and begin to explore possible explanations for the differences observed across high schools.

Fewer than one third of APS ninth graders graduated high school on time, seamlessly enrolled in college, and persisted to their second year of college.

Figure 1. Student Progression from Ninth Grade into College, by High School (District Average, Highest Rate, and Lowest Rate)


Note. The sample includes 2006-07 first-time ninth grades. Post-secondary enrollment outcomes from NSC matched records. All other data from APS administrative records.

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Analyses: On Track to High School Graduation

## Section 2. On Track to High School Graduation

The majority of students who fail to graduate from high school send clear signals of academic disengagement years earlier. Ninth grade, in particular, appears to be a crucial "make-it-or-break-it" year for high school success. Focusing on student performance in ninth grade, in terms of course credit accumulation and GPA, is important because it enables the identification of most potential dropouts while still leaving sufficient time to plan and provide additional supports that can increase students' likelihood of graduation.

> Ninth-grade on-track status was highly predictive of students' high school graduation and college-going outcomes.

Figure 2. Student Progression From Ninth Grade Into College, by Course Credits and GPA After First High School Year


Note. The sample includes 2006-07 APS first-time ninth graders attending their first semester of ninth grade in APS. Students who transferred into or out of the district are excluded from the sample. Postsecondary enrollment data are from NSC matched records. Students are considered on track to graduate if they have the recommended number of courses by the end of their ninth-grade year.

Academic performance in terms of course credit accumulation and grades is an important predictor of high school graduation and college outcomes. Figure 2 displays the rates at which APS students at three different ninth-grade performance levels were able to meet each milestone along the college-going pathway. (This analysis focuses on students who entered high school in 2006-07.) The three performance levels used in this figure and in Figure 3 are off track (insufficient earned credits), on track with low GPA (sufficient credits but GPA lower than 3.0), and on track with high GPA (both sufficient credits and GPA of 3.0 or higher). For more details on how on-track status is defined in this brief, refer to Appendix 2.

As Figure 2 shows, students who fell off track during their first year in high school were far less likely to graduate on time, to enroll in college, and to persist in college than their on-track peers. However, even among students on track to graduate at the end of ninth grade, those with a cumulative ninth-grade GPA of 3.0 or higher had greater high school graduation rates, college enrollment, and persistence rates than their classmates with adequate credit accumulation but relatively low GPAs.

> Across APS high schools, the share of students off track to graduate from high school by the end of ninth grade varied widely.

Figure 3. Shares of Students On Track and Off Track to Graduate at the End of Ninth Grade, by High School


Note. The sample includes 2006-07 and 2007-08 APS first-time ninth graders. Students who transferred into or out of the district are excluded from the sample. All data are from APS administrative records

Figure 3 shows the distribution of students at each APS high school across the same three performance levels shown in Figure $2 .{ }^{2}$ On average, in 2006-07 and 2007-08, nearly two in five (39\%) ninth graders across the district fell off track to graduate by the end of their freshman year; however, this rate varied considerably across schools. Half of all ninth graders enrolled at the high schools with the highest off-track rates failed to accumulate sufficient credits to be considered on track for on-time high school graduation. At the other end of the spectrum, only $15 \%$ of ninth graders at La Cueva High School fell off track during their freshman year while more than half accumulated sufficient course credits and earned a high GPA.

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Analyses: High School Graduation

## Section 3. High School Graduation

High school graduation is a critical stepping stone to both college access and career readiness. Understanding trends and variation in high school graduation rates across schools and student subgroups is an essential first step towards improving the long-term outcomes of APS students. The analyses in this section examine differences in graduation rates across high schools in the district and motivate questions about the extent to which schools may differentially influence student trajectories. Due to differences in the methodologies for calculating high school graduation rates, the rates reported here differ somewhat from the graduation rates for the same cohorts reported by the New Mexico Public Education Department. For more information on methodology, refer to Appendix 2.

Figure 4 shows the graduation rates of 2006-07 ninth graders at eleven APS high schools, displayed separately for on-time graduation (i.e., within four years of first-time ninth-grade enrollment) and for graduation within five years. Overall, 57\% of these ninth graders graduated high school on time-that is, by 2009-10-and another 4\% graduated within five years.

High school graduation rates varied widely across high schools in the district.

Figure 4. High School Graduation Rates, by High School


Note. The sample includes 2006-07 APS first-time ninth graders. All data from APS administrative records. ${ }^{3}$

## Large differences in on-time graduation rates existed across high schools,

 even among students with similar prior achievement levels.Figure 5. On-Time High School Graduation Rates by Quartile of Prior Academic Achievement, by High School


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Analyses: High School Graduation

Students' preparation in earlier grades has been shown to be a powerful predictor of their performance in high school. Figure 5 allows us to examine this phenomenon more closely for ninth graders who entered APS high schools in 2006-07 and 2007-08. The figure reports on-time graduation rates by high school for subgroups of students with different levels of prior achievement. Specifically, students were grouped into four quartiles across the entire district, based on their scores on the eighth-grade New Mexico Standards Based Assessment (SBA) mathematics test. The figure shows that while prior student achievement explained some of the differences across high schools, it did not account for all of the observed differences in high school graduation rates.

Not surprisingly, across the district graduation rates for these cohorts were higher, on average, for students with higher eighth-grade math scores. However, within each quartile lthat is, among students with similar incoming achievement), graduation rates differed widely across high schools. For example, among students in the bottom quartile of prior performance, $58 \%$ at Cibola and Eldorado graduated on time-a rate more than twice as high as the graduation rate of similarly low-performing students at Rio Grande, where fewer than one quarter graduated within four years. Across-school differences, albeit of smaller magnitude, also existed among higher-performing students. In the schools with the highest graduation rates for students with eighth-grade math scores in the third and top quartiles, $85 \%$ and $92 \%$, respectively, graduated within four years. In contrast, the schools with the lowest graduation rates for these two quartiles graduated fewer than two thirds ( $58 \%$ and $65 \%$, respectively) of students with high incoming academic achievement.

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## Analyses: College Enrollment

## Section 4. College Enrollment

On average, two out of three APS students who completed high school between 2006-07 and 2010-11 enrolled in college seamlessly: $42 \%$ enrolled at four-year colleges and an additional 25\% of graduates enrolled at two-year colleges. The overall college enrollment rate at APS was similar to the national average rate: Nationwide, $68 \%$ of high school graduates enrolled in college seamlessly. ${ }^{5}$

However, as with on-track status and high school graduation, college enrollment in the district differed across schools. At high schools like La Cueva, Eldorado, and Sandia, nearly $80 \%$ of graduates enrolled in college the fall after high school graduation, and more than half did so at four-year colleges. At the same time, only about half of West Mesa and Rio Grande graduates enrolled in college seamlessly-and the majority of those who did pursued enrollment at two-year colleges.

## College enrollment in the district was slightly lower than the national average but differed substantially across APS high schools

Figure 6. College Enrollment Rates by High School: Seamless Enrollers


Note. The sample includes 2006-07 through 2010-11 APS graduates from district high schools. Postsecondary enrollment outcomes from NSC matched records. All other data from district administrative records. ${ }^{4}$

## College enrollment rates for students with similar incoming

 achievement varied widely across APS high schools.Figure 7. Seamless College Enrollment Rates by Quartile of Prior Academic Achievement, by High School


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## SDP COLLEGE-GOING DIAGNOSTIC

## Analyses: College Enrollment

Across the district, seamless college enrollment rates of 2009-10 and 2010-11 graduates were higher for students with stronger incoming academic achievement. (Due to data limitations, we are unable to include earlier cohorts in this analysis.) As shown in Figure 7, on average, 84\% of students with eighth-grade math test scores in the top quartile enrolled in college the first fall after high school graduation-in contrast to only $46 \%$ of students whose eighth-grade test scores placed them in the bottom quartile districtwide.

However, college enrollment rates varied widely across high schools even when comparing students with similar eighth-grade achievement. Among students with eighthgrade performance in the top quartile, college enrollment rates for individual high schools ranged from 61\% at West Mesa to 91\% at Albuquerque High School. Among students with bottom-quartile eighth-grade performance, the range in college enrollment rates was similar to that of top-quartile students, albeit at considerably lower levels: $38 \%$ of students with bottom-quartile eighth-grade test scores at West Mesa enrolled in college seamlessly, compared with two thirds of similarly low-performing students at Eldorado. In fact, some schools had higher college enrollment rates of previously low-achieving students than other schools did of high-achieving students. For example, 66\% of Eldorado students with eighth-grade performance in the bottom quartile enrolled in college, compared with $61 \%$ of West Mesa students whose eighthgrade achievement placed them in the top quartile across the district.

Given the wide variation in college enrollment across APS high schools, SDP Data Fellows surveyed students at the three high schools with the lowest college-going ratesRio Grande, Highland, and West Mesa-to examine the factors that may drive low college enrollment rates. The survey found that students in these high schools reported high levels of college aspirations, at odds with the schools' low actual college enrollment rates. On average, $81 \%$ of surveyed students expressed aspirations to go to college (Figure 8). These aspirations were voiced by the majority of students, regardless of their level of prior achievement. Nearly three quarters of students with bottom-quartile eighth-grade test scores voiced a desire to go to college, as did $92 \%$ of their peers with top-quartile test scores.

Figure 8. College Aspirations Among Students at Three APS High Schools, by Quartile of Prior Achievement (Highland, Rio Grande, and West Mesa Students)


Note. The sample includes student surveys administered to 2,125 students from Highland, Rio Grande, and West Mesa high schools enrolled in courses with teachers who participated in the SIG Evaluation and Compensation Pilot. Eighth-grade math test score quartile information from APS administrative records.

## Students had high college aspirations but lacked key information about financial aid options.

Figure 9. Expected Barriers to College Enrollment, as Reported by Students at Three APS High Schools, (Highland, Rio Grande, and West Mesa Students)


Note. The sample includes student surveys administered to 2,125 students from Highland, Rio Grande, and West Mesa high schools enrolled in courses with teachers who participated in the SIG Evaluation and Compensation Pilot. Eighth-grade math test score quartile information from APS administrative records.

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## Analyses: College Enrollment

According to the survey results, limited information about scholarship opportunities and financial aid options-rather than lack of aspirations-may be a major barrier to students enrolling in college after graduation. For example, since 1996, New Mexico has offered the Legislative Lottery Scholarship-a partial tuition award for New Mexico high school graduates who attend a public college or university in the state. ${ }^{6}$ However, on average, only $28 \%$ of surveyed students-and fewer than one quarter of low-performing students-reported awareness of the lottery scholarship as a potential source of funding college. In fact, students listed paying for college as the barrier most likely to prevent them from pursuing higher education (see Figure 9).

> APS graduates favor specific postsecondary institutions: $87 \%$ of seamless enrollers attended one of five colleges.

Between 2006-07 and 2010-11, 87\% of APS graduates who seamlessly enrolled in college attended one of five postsecondary institutions in New Mexico, and more than 80\% attended either University of New Mexico or Central New Mexico Community College. Among graduates who enrolled at four-year colleges, nearly three quarters attended the University of New Mexico. Among graduates enrolling at two-year colleges, $94 \%$ attended Central New Mexico Community College.

Additional analyses show that nearly nine out of 10 students ( $88 \%$ ) in these cohorts who enrolled at the University of New Mexico persisted to their second year of college (analyses not shown here). At Central New Mexico Community College, the second-year persistence rate was $66 \%$. These rates were both higher than the national average persistence rates (though the latter are calculated using a slightly different methodology). Nationally, 77\% of students who first enrolled at four-year colleges in 201011 persisted to the second year; for two-year colleges, the national persistence rate was $54 \% .^{7}$ Given the limited number of postsecondary institutions in the state, the high concentration of APS graduates at just two of them, and the existence of the state's Legislative Lottery Scholarship that covers public-college tuition costs, APS may have a unique opportunity to collaborate with the University of New Mexico and Central New Mexico Community College on initiatives that further enhance college enrollment and persistence among its graduates.

Table 1. Top-Enrolling Postsecondary Institutions for APS Graduates: Seamless Enrollers

| Name of Institution | \% of All College-Enrolled <br> APS Graduates | \% of APS Graduates Enrolled At Four-Year Colleges | \% of APS Graduates Enrolled At Two-Year Colleges |
| :---: | :---: | :---: | :---: |
| University of New Mexico | 45 | 73 | - |
| Central New Mexico Community College | 36 | - | 94 |
| New Mexico State - Main Campus | 5 | 8 | - |
| Eastern New Mexico University | 1 | 2 | - |
| New Mexico Highlands University | <1 | 1 | - |
| Other Postsecondary Institutions | 13 | 17 | 6 |
| Total (Percent of Students Enrolled in College) | 100 | 100 | 100 |

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## Appendix 1: Data Sources

## Which students are included in these analyses?

For many analyses, we combined student-level data from at least two consecutive cohorts of first-time ninth graders and graduates from traditional high schools. This ensured sufficient numbers of students at each school and reduced short-term random variation in outcomes. While this is appropriate for understanding recent high school graduation and college-going outcomes of students in the district as a whole, major changes that occurred in any individual school during the most recent year examined may be muted in the reported outcomes.

We used the ninth-grade cohorts of 2006-07 and 2007-08 to analyze variation in high school graduation outcomes, and the high school graduates from the 2006-07 through 2010-11 cohorts to examine college-going outcomes. Due to data availability limitations, some of the analyses presented in this brief include only a subset of these cohorts.

## Which tests are used to identify prior student achievement?

For analyses that display information on prior student achievement (for example, Figures 5 and 7), we used eighth-grade student scores on the mathematics portion of the New Mexico Standards Based Assessment (SBA). Using eighth-grade student scores from the ELA portion of the same test yielded very similar results.

## How does the Strategic Data Project know about the college enrollment outcomes of APS graduates?

In partnership with the school district, we obtained college enrollment data by linking APS administrative student records to postsecondary enrollment data from the National Student Clearinghouse (NSC). NSC is a national nonprofit organization that provides postsecondary enrollment verification for colleges and universities. The clearinghouse maintains student enrollment records for over 3,600 institutions of higher education throughout the United States, including career and technical training institutes, as well as two- and four-year colleges and universities. Presently, NSC covers institutions serving $98 \%$ of all postsecondary students nationwide and $90 \%$ of all students enrolled at postsecondary institutions in New Mexico. ${ }^{8}$ However, not all postsecondary institutions participate in the NSC and in a number of instances students' information cannot be matched to their NSC records. As a result, actual enrollment rates are likely to be slightly higher than those shown in this report.

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## Appendix 2: Definitions

## On-Track-to-Graduation Status

We determined students' on- and off-track status in the first four years of their high school careers based on the number of credits attained during each school year. Using APS high school graduation requirements as guidelines, we considered a student to be on track during each year of high school if he or she accumulated total, ELA, and mathematics credits that matched or exceeded the numbers presented in Table A1.

Table A1. Credits Required for a Student to Be Considered on Track to Graduate

| Year in High School | Total <br> Credits | ELA <br> Credits | Math <br> Credits |
| :--- | :--- | :--- | :--- |
| First year | 5 | 1 | 1 |
| Second year | 11 | 2 | 1 |
| Third year | 17 | 3 | 2 |
| Fourth year (graduation) | 23 | 4 | 3 |

We further classified students who meet these credit requirements into two groups: those with a cumulative GPA lower than 3.0, and those with a cumulative GPA equal to or higher than 3.0.

It is important to note that the high school graduation requirements listed in Table A1 above were in effect for the ninth-grade cohorts included in our analytic sample (200607 and 2007-08). The requirements have since changed. For example, starting with the class of 2013, students are required to complete four credits of mathematics to graduate.

## High School Completion Rate

To calculate high school completion rates, we used a cohort-based formula similar to the "compact rate" used by the National Governors Association (NGA) and required for graduation-rate accountability by the No Child Left Behind Act. ${ }^{\text {a }}$ The SDP formula divides the number of high school completers (students earning standard diplomas) by the number of first-time ninth graders four years earlier. To identify the number of first-time ninth
graders four years earlier, we added together two groups of students: (1) students enrolled in an APS high school in ninth grade and (2) students enrolled in a different district in ninth grade who transferred into APS at some point during high school. We excluded from the calculation students who transferred out of the district between ninth and twelfth grade.

Our results differ somewhat from the graduation rates for the same student cohorts reported by APS, which use statistics calculated using a formula from the New Mexico Public Education Department (PED). While New Mexico also utilizes the NGA cohort computation method, the methodology distributes student outcomes proportionally across all New Mexico high schools a given student has attended-a divergence from SDP methodology. In addition, prior to 2008, graduation rates were calculated as the shares of incoming high school seniors who completed high school by the end of the year. High school completion rates prior to 2008 reported by the state of New Mexico for APS cannot be compared to those published after 2008. ${ }^{10}$

## College Enrollment Rate

We reported on two college enrollment outcomes for APS graduates who earn high school diplomas: (1) enrollment in college the fall following high school graduation (seamless enrollers) and (2) enrollment at any point within two years of graduating high school (delayed enrollers). To calculate seamless enrollment, we determined whether a student is enrolled in college as of October 1 of his or her high school graduation year. To calculate enrollment within two years, we used a cut-off date of two calendar years from the date of graduation.

## College Persistence Rate

We examined persistence rates in college for APS graduates who enroll in college seamlessly. To calculate these rates, we determined whether a student remained enrolled in college on October 1 one year following his or her initial enrollment date. The persistence outcome was not dependent on maintaining enrollment at the same institution from one year to the next; we considered a student to have persisted to the second year if we observed that student enrolled at any college over the course of two subsequent years.

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Endnotes
${ }^{1}$ The national high school graduation rate estimate is for 2009-10 and is reported by the U.S. Department of Education's National Center for Education Statistics (NCES). The national average college enrollment and college persistence rates of ninth graders are calculated by the authors based on college enrollment (for 2009-10) and persistence (for 2010-11) data reported by the NCES (U.S. Department of Education, 2012a, 2012b, 2012c). Because NCES's data collection, methodology, and analysis approach differ from ours, we encourage caution when comparing APS-specific rates to these national estimates.
${ }^{2}$ The Consortium on Chicago School Research pioneered the use of on-track indicators and their relationship to eventual high school completion. See, for instance, Allensworth \& Easton, 2005.
${ }^{3}$ The national average graduation rate shown in Figure 4 is for 2009-10 and equals the total number of diploma recipients in 2008-09, divided by the average membership of the eighth grade class in 2005-06, the ninth grade class in 2006-07, and the tenth grade class in 2007-08. It is reported by the National Center for Education Statistics. See endnotes for full reference.
${ }^{4}$ The national college enrollment rate shown in Figure 6 is for 2010-11. It is equal to the share of individuals aged 16 to 24 who completed high school in the preceding 12 months who were enrolled in college as of October 2011. It is reported by the National Center for Education Statistics based on data from the Census Bureau's Current Population Survey. See NCES, 2012.
${ }^{5}$ The national college enrollment rate estimate is for 2010-11 and is reported by the U.S. Department of Education's NCES based on data from the Census Bureau's Current Population Survey (U.S. Department of Education, 2012b). The NCES calculates the college enrollment rate as the share of individuals aged 16 to 24 and completing high school in the preceding 12 months who enrolled in college as of October 2011. This method is similar to the one used in this analysis.
${ }^{6}$ The Legislative Lottery Scholarship is a renewable partial tuition award for New Mexico high school graduates or GED recipients who attend one of 25 public colleges or universities in the state for up to eight consecutive semesters. To be eligible, a student must be enrolled full-time at an eligible New Mexico public college or university in the first regular semester immediately following high school graduation and must also obtain and maintain at least a cumulative 2.5 GPA. More information can be found at New Mexico Higher Education Department's website: http://www.hed.state.nm.us/students/lotteryscholarship.aspx
${ }^{7}$ The national average college persistence rates are calculated by the authors based on college retention data for 2010-11 reported by the NCES (U.S. Department of Education, 2012c). Because NCES's data collection, methodology, and analysis approach differ from ours, we encourage caution when comparing APS-specific rates to these national estimates.
${ }^{8}$ The national coverage rate is reported by the National Student Clearinghouse (2013). The state rate for New Mexico is calculated by the authors by comparing the number of students enrolled at New Mexico postsecondary institutions covered in the National Student Clearinghouse with the number of students enrolled at all postsecondary institutions in the state as reported in the Integrated Postsecondary Education Data System (U.S. Department of Education, 2013).
${ }^{9}$ The National Governors Association "compact rate" is a four-year, adjusted cohort graduation rate used to determine the percentage of on-time high school graduates from a given four-year student cohort. It is widely considered a valid and reliable formula and has been adopted by more than half of the states to improve the consistency and accuracy of graduation rate reporting. For more information on the compact rate, see National Governors Association $(2005,2010)$.
${ }^{10}$ The methodology for calculating the New Mexico 4- and 5-year cohort rates can be found on the Public Education Department (PED) website: http://ped.state.nm.us/Graduation/index.html

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Allensworth, E. M., \& Easton, J. Q. (2005). The on-track indicator as a predictor of high school graduation. Chicago, IL: Consortium on Chicago School Research. Retrieved from http://ccsr.uchicago.edu/ sites/default/files/publications/p78.pdf

Lippman, L., Guzman, L., Dombrowski Keith, J., Kinukawa, A. Schwalb, R., \& Tice, P. (2008). Parent expectations and planning for college: Statistical analysis report (NCES Publication No. 2008-079). Washington, DC: US Government Printing Office.
National Governors Association. (2005). Graduation counts: A report of the National Governors Association Task Force on state high school graduation data. Washington, DC; Author.

National Governors Association. (2010). Implementing graduation counts: State progress to date, 2010. Washington, DC: Author.
National Student Clearinghouse. (2013). Who we are. Retrieved from http://www.studentclearinghouse.org/about/

Sallie Mae, Inc., \& Gallup, Inc. (2010). How America pays for college: Sallie Mae's national study of college students and parents conducted by Gallup, 2010. Reston, VA: Sallie Mae.
U.S. Department of Education. National Center for Education Statistics, (2013). Integrated Postsecondary Education Data System (IPEDS). Retrieved from http://nces.ed.gov/ipeds/
U.S. Department of Education, National Center for Education Statistics (2012a). Table 124: Averaged freshman graduation rates for public secondary schools, by state or jurisdiction: Selected years, 1990-91 through 2009-10. In Digest of education statistics (2012 ed.). Retrieved from http://nces.ed.gov/programs/digest/d12/tables/dt12_124.asp
U.S. Department of Education, National Center for Education Statistics. (2012b). Table 234: Recent high school completers and their enrollment in 2-year and 4-year colleges, by sex: 1960 through 2011. In Digest of education statistics (2012 ed.). Retrieved from http://nces.ed.gov/ programs/digest/d12/tables/dt12_234.asp
U.S. Department of Education, National Center for Education Statistics. (2012c). Table 378: Retention of first-time degree-seeking undergraduates at degree-granting institutions, by attendance status, level and control of institution, and percentage of applications accepted: 2006 to 2011. In Digest of education statistics (2012 ed.). Retrieved from http://nces.ed.gov/programs/digest/d12/tables/dt12_378.asp

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[^0]:    Note. The sample includes 2006-07 and 2007-08 APS first-time ninth graders with eighth-grade SBA math test scores. All data from APS administrative records

[^1]:    Note. The sample includes 2009-10 and 2010-11 APS high school graduates with eighth-grade SBA math test scores. All data from APS administrative records.

