Introduction

In 2014-15, the high school graduation rate reached a record high of 83 percent (U.S. Department of Education 2016). Despite the gains, over half a million students still drop out of high school each year (U.S. Department of Education 2015). High schools have adopted various strategies designed to keep students who are at risk of not graduating in school and on track for earning the credits required to graduate. “At-risk” students are defined as those failing to achieve basic proficiency in key subjects or exhibiting behaviors that can lead to failure and/or dropping out of school. Dropout prevention strategies are diverse; they vary in type of program, services offered, frequency, intensity, and duration of contact with target students.

The U.S. Department of Education (Department) sponsored the National Survey on High School Strategies Designed to Help At-Risk Students Graduate (HSS), which aimed to provide descriptive information on the prevalence and characteristics of dropout prevention strategies for at-risk students. The survey collected data in the 2014-15 school year from a nationally representative sample of 2,142 public high schools and focused on 13 specific high school improvement strategies identified by a panel of external experts and senior Department officials. This brief on college-level coursework for high school students is the eighth in a series of briefs being released with key findings about these high school improvement strategies.

Definition of College-Level Coursework for High School Students

The HSS defined college-level coursework for high school students as an advanced curriculum that provides students with postsecondary learning experiences while they are still in high school, allowing students to earn college credit in some instances. For the purpose of this brief, college-level coursework includes such models as early college high schools (ECHS), a schoolwide model that provides students the opportunity to earn an Associate’s degree while in high school; Advanced Placement (AP), college-level courses for which students can receive college credit if they earn qualifying scores on an end-of-course exam; International Baccalaureate (IB), a high school diploma program that integrates critical thinking skills with college-level courses and a senior project; dual enrollment, a strategy to encourage students to take more rigorous coursework, including academic and technical courses at the college level, and potentially earn college credit; and Cambridge/Advanced International Certificate of Education (AICE), a high school diploma program that emphasizes college-level courses across different subjects such as math, science, languages, arts, and humanities.

1 The survey examined 13 strategies that are designed to improve high school outcomes for at-risk students. These strategies are: (1) academic support classes, (2) academic tutoring, (3) career-themed curriculum, (4) case management services, (5) college-level coursework, (6) competency-based advancement, (7) credit recovery, (8) early warning systems, (9) high school transition activities, (10) mentoring, (11) personalized learning plans, (12) social services, and (13) student support teams. See http://www2.ed.gov/about/offices/list/opepd/ppss/reports-high-school.html for the series of briefs.
Although taking college-level classes in high school originated in efforts to provide advanced students opportunities to learn college material, many high schools use this strategy to serve general education students and in some cases at-risk students who may be better engaged by advanced courses and/or benefit from acquiring college course credit (Education Commission of the States 2016). One challenge, however, with using this approach as a strategy for at-risk students is ensuring sufficient academic readiness. Some schools mediate this by providing academic supports that may include tutoring, counseling, and academic support classes (National High School Center 2007).

Research on College-Level Coursework for High School Students
Some college-level coursework models have been shown to have a positive effect on student outcomes like attendance, high school graduation, college enrollment, and college completion. These studies compared the outcomes of program participants with those of nonparticipants (the comparison group) and tried to account for differences between the two groups in their characteristics and orientations (e.g., motivation or perseverance).\(^2\)

**Early college high school.** Two experimental studies found that ECHS students were more likely than comparison students to stay in and graduate from high school, score higher on standardized assessments in English language arts and mathematics, pass end-of-course exams, enroll in college, and earn a college degree (Berger et al. 2013, 2014; Edmunds et al. 2012, 2015). Approximately half of ECHS students and comparison students in the two study samples were economically disadvantaged.

**Advanced Placement.** One quasi-experimental study found that students who took AP courses were more likely than comparison students to graduate from high school and enroll in college (Jeong 2009). Another quasi-experimental study found that students who took AP courses and passed their AP exams were more likely than comparison students to earn a college degree even after controlling for students’ eighth-grade mathematics test score and free and reduced-price lunch status (Long, Conger, and Latarola 2012). Descriptive research, however, has shown that AP exam passing rates are relatively low for minority and economically disadvantaged students, even among those who complete AP courses. One study found that of students who took AP courses in English, mathematics, science, or social studies, only 11 percent of African American, 14 percent of Hispanic, and 13 percent of low-income students actually passed the corresponding AP exams compared with 35 percent of white students and higher income students (Dougherty, Mellor, and Jian 2006).

**Dual enrollment.** Two experimental studies found that dual enrollment students were more likely than comparison students to stay in and graduate from high school, score higher on standardized assessments in English language arts and mathematics, pass end-of-course exams, enroll in college, and earn a college degree (U.S. Department of Education 2017).

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\(^2\) This brief uses terms like *experimental* and *quasi-experimental* studies to distinguish two types of studies appropriate for determining the effects of a strategy or practice. An experimental study (also known as a randomized controlled trial) is the most rigorous approach because it creates a participant group and a nonparticipant group through a random process like a lottery to ensure that the characteristics of the two groups are equivalent before any had a chance to participate. This means the impact of the strategy or practice—estimated by comparing the outcomes of the two groups—is not influenced or “biased” by differences between the groups on characteristics that are hard to measure but could affect the outcomes (e.g., motivation, perseverance) (Dynarski and Kisker 2014). A quasi-experimental study (also known as a quasi-experimental design study or QED) takes those already participating and creates a nonparticipant group by selecting students who are similar to the participants in terms of their demographic and socioeconomic characteristics. Because participants can differ from nonparticipants in important ways that are not measured in the study, confidence in the results of a quasi-experimental study is not as strong as for an experimental study.
International Baccalaureate. One quasi-experimental study found that students who participated in the IB program were more likely than comparison students to enroll in a four-year college and persist for two years at a four-year college (Coca et al. 2012).

Survey Findings on College-Level Coursework for High School Students
This survey did not examine the effectiveness of college-level coursework for high school students but instead described the kinds of schools that offer college-level coursework and their approaches to implementing the strategy. This analysis included an examination of four school characteristics: (1) size, (2) poverty, (3) locale, and (4) graduation rate. Only statistically significant differences within school characteristics (at $p < .05$) are discussed; non-statistically significant differences are not reported. School characteristics were defined in the following ways:

School size. School size categories consisted of small schools (fewer than 500 students), medium schools (500–1,199 students), and large schools (1,200 or more students) based on 2013–14 Common Core of Data (CCD) student enrollment data.

School poverty. Poverty levels were based on 2013–14 CCD free or reduced-price lunch (FRPL) and total CCD school enrollment data. The poverty categories were low-poverty schools (below 35 percent students with FRPL), medium-poverty schools (35–49 percent students with FRPL), and high-poverty schools (50 percent or more students with FRPL).

School locale. School locale included three mutually exclusive locales from the CCD: rural schools, suburban/town schools, and city schools.

Graduation rate. School classification by graduation rate was based on three categories: low graduation rate (67 percent or lower graduation rate), medium graduation rate (68 to 89 percent graduation rate), and high graduation rate (90 percent or higher graduation rate).

Summary of Key Findings
- Three-quarters of all high schools (75 percent) offered college-level coursework to at least some students in 2014–15; an estimated 27 percent of all high school students participated in college-level coursework, according to school principals.

- High-poverty high schools were less likely than low-poverty high schools to offer college-level coursework; low-graduation-rate high schools were also less likely than high-graduation-rate high schools to offer college-level coursework. Large high schools were more likely than small high schools to offer college-level coursework, and more suburban and rural high schools than city high schools offered college-level coursework.

- Among high schools that allowed at-risk students to participate in college-level coursework, the most common requirement was approval from a school administrator or guidance counselor (49 percent), followed by a teacher’s recommendation (47 percent).

- High schools provided different types of college-level coursework for at-risk students; the most common type was dual enrollment (85 percent), followed by AP courses (72 percent), ECHS (28 percent), and IB (5 percent).

- The most common support that high schools provided to at-risk students participating in college-level coursework was tutoring (59 percent), followed by additional counseling (44 percent) and academic support classes (39 percent).
What was the prevalence of college-level coursework in high schools?

In 2014–15, 75 percent of high schools nationwide offered college-level coursework to at least some students; an estimated 27 percent of all high school students participated in college-level coursework, according to school principals. The prevalence of college-level coursework for high school students varied by school size, poverty level, locale, and graduation rate (Exhibit 1).

Exhibit 1. Percentage of high schools that offered college-level coursework, 2014–15

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>All high schools</td>
<td>75%</td>
</tr>
<tr>
<td>Large</td>
<td>94%*</td>
</tr>
<tr>
<td>Small</td>
<td>63%</td>
</tr>
<tr>
<td>High poverty</td>
<td>66%*</td>
</tr>
<tr>
<td>Low poverty</td>
<td>83%</td>
</tr>
<tr>
<td>City</td>
<td>70%*</td>
</tr>
<tr>
<td>Suburban</td>
<td>77%</td>
</tr>
<tr>
<td>Rural</td>
<td>76%</td>
</tr>
<tr>
<td>Low graduation rate</td>
<td>50%*</td>
</tr>
<tr>
<td>High graduation rate</td>
<td>85%</td>
</tr>
</tbody>
</table>

Exhibit reads: In 2014–15, 75 percent of high schools nationwide offered college-level coursework to at least some students. * p < .05.

NOTE: The asterisk is placed on one case per comparison. Differences across school characteristics with two categories were based on comparisons between the two groups. Differences across school characteristics with three categories were based on goodness-of-fit across all three categories.

Unweighted n = 1,925.

SOURCE: HSS survey of high school administrators, 2015 (Question 42).

Differences by school size. Large high schools were more likely than small high schools to offer college-level coursework (94 percent versus 63 percent).

Differences by school poverty. High-poverty high schools were less likely than low-poverty high schools to offer college-level coursework (66 percent versus 83 percent).

Differences by school locale. More suburban and rural high schools than city high schools offered college-level coursework (77 percent of suburban high schools and 76 percent of rural high schools versus 70 percent of city high schools).

Differences by graduation rate. Low-graduation-rate high schools were less likely than high-graduation-rate high schools to offer college-level coursework (50 percent versus 85 percent).

How did high schools target students for participation in college-level coursework?

Among high schools that offered college-level coursework, 73 percent offered it on a schoolwide basis, and 27 percent targeted selected students for participation. Schools can target students based on a
range of factors. Of high schools that targeted selected students, the most common factor was high academic performance (85 percent), followed by staff referrals (73 percent) and a particular grade level such as 10th grade (27 percent). Less common factors were those often associated with at-risk students, such as discipline issues (5 percent), poor academic performance (5 percent), and high school reentry (4 percent). The criteria schools used to identify students for participation in college-level coursework varied by school poverty level and school locale. There were no significant differences by school size or graduation rate (Exhibit 2).

**Exhibit 2. Percentage of high schools that targeted specific student subgroups or issues for participation in college-level coursework, 2014–15**

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performing above standards</td>
<td>85%</td>
</tr>
<tr>
<td>Referred by staff</td>
<td>73%</td>
</tr>
<tr>
<td>Particular grade level</td>
<td>27%</td>
</tr>
<tr>
<td>Attendance issues</td>
<td>7%</td>
</tr>
<tr>
<td>English Learner</td>
<td>6%</td>
</tr>
<tr>
<td>Discipline issues</td>
<td>5%</td>
</tr>
<tr>
<td>Performing below standards</td>
<td>5%</td>
</tr>
<tr>
<td>Reentry</td>
<td>4%</td>
</tr>
</tbody>
</table>

Exhibit reads: Among high schools that targeted selected students for participation in college-level coursework in 2014–15, 85 percent targeted students performing above standards. Unweighted n = 368.

SOURCE: HSS survey of high school administrators, 2015 (Question 45).

Differences by poverty level. High-poverty high schools were more likely than low-poverty high schools to target students performing below standards for participation in college-level coursework (7 percent versus 2 percent) and less likely to target students performing above standards (78 percent versus 93 percent).

Differences by school locale. More city and suburban high schools than rural high schools targeted students with discipline issues for participation in college-level coursework (8 percent in city and suburban high schools versus 1 percent in rural high schools).

Did high schools require at-risk students to demonstrate their readiness for college-level coursework? Many high schools reported special instances where allowing an at-risk student to participate in college-level coursework could be appropriate provided that the student could demonstrate readiness (89 percent). A small percentage of high schools indicated that at-risk students do not participate in

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3 As defined for the HSS, reentry students were those who dropped out of high school and then reenrolled.
college-level coursework (11 percent). Among high schools that allowed at-risk students to participate in college-level coursework, the most common requirement was approval from a school administrator or guidance counselor (49 percent), followed by a teacher’s recommendation (47 percent). Requirements for at-risk students varied by school size, school poverty level, school locale, and graduation rate (Exhibit 3).

Exhibit 3. Percentage of high schools that allowed at-risk students to participate in college-level coursework, by requirements imposed before participation, 2014–15

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>School administrator or guidance counselor approval</td>
<td>49%</td>
</tr>
<tr>
<td>Teacher recommendation</td>
<td>47%</td>
</tr>
<tr>
<td>Grade level</td>
<td>35%</td>
</tr>
<tr>
<td>Minimum GPA</td>
<td>32%</td>
</tr>
<tr>
<td>Minimum score on standardized test or college placement exam</td>
<td>31%</td>
</tr>
<tr>
<td>Parent involvement</td>
<td>21%</td>
</tr>
<tr>
<td>Satisfactory attendance record</td>
<td>18%</td>
</tr>
<tr>
<td>Prerequisite course completion</td>
<td>2%</td>
</tr>
</tbody>
</table>

Exhibit reads: Among high schools that allowed at-risk students to participate in college-level coursework in 2014–15, 49 percent required that the students receive approval from a school administrator or guidance/school counselor to participate. Unweighted \( n = 1,271 \). SOURCE: HSS survey of high school administrators, 2015 (Question 50).

**Differences by school size.** Large high schools were more likely than small high schools to require at-risk students to have a teacher’s recommendation (56 percent versus 38 percent) or parental permission (29 percent versus 16 percent) before participating in college-level coursework. Large high schools were less likely than small high schools to require that at-risk students meet a grade-level threshold such as 11th grade or 12th grade (30 percent versus 37 percent) before participating in college-level coursework.

**Differences by poverty level.** High-poverty high schools were more likely than low-poverty high schools to require at-risk students to obtain approval from a school administrator or guidance counselor (52 percent versus 43 percent), have a minimum GPA (34 percent versus 27 percent), have a satisfactory attendance record (22 percent versus 14 percent), or receive a minimum score on a standardized test or college placement exam (35 percent versus 24 percent) before participating in college-level coursework.

**Differences by school locale.** More city high schools than suburban and rural high schools required at-risk students to have a teacher’s recommendation (60 percent in city high schools versus 46 percent in suburban high schools and 38 percent in rural high schools) or have a satisfactory attendance record (25 percent in city high schools versus 19 percent in suburban high schools and 14 percent in rural high schools) before participating in college-level coursework.
Differences by graduation rate. Low-graduation-rate high schools were more likely than high-graduation-rate high schools to require at-risk students to have a satisfactory attendance record (24 percent versus 15 percent) before participating in college-level coursework.

What type of college-level coursework did high schools offer to at-risk students? High schools that offered college-level coursework to at-risk students provided various types of advanced coursework. The most common college-level coursework for at-risk students was dual enrollment classes (85 percent), followed by AP courses (72 percent), ECHS (28 percent), and IB (5 percent). The types of college-level coursework offered to at-risk students varied by school size, school poverty level, school locale, and graduation rate.

Differences by school size. Large high schools were more likely than small high schools to offer at-risk students AP courses (92 percent versus 54 percent) or IB (14 percent versus 2 percent).

Differences by poverty level. High-poverty high schools were less likely than low-poverty high schools to offer at-risk students AP courses (67 percent versus 81 percent).

Differences by school locale. More city high schools than suburban or rural high schools offered at-risk students AP courses (80 percent in city high schools versus 77 percent in suburban high schools and 62 percent in rural high schools) or IB (10 percent of city high schools versus 6 percent of suburban high schools and 1 percent of rural high schools). More rural high schools than city or suburban high schools offered at-risk students dual enrollment classes (92 percent in rural high schools versus 78 percent in city high schools and 84 percent in suburban high schools).

Differences by graduation rate. Low-graduation-rate high schools were less likely than high-graduation-rate high schools to offer at-risk students AP courses (48 percent versus 74 percent).

What supports were available to at-risk students participating in college-level coursework? High schools that offered college-level coursework to at-risk students provided different supports to help them persist and succeed in these courses (Exhibit 4). The most common support for at-risk students participating in college-level coursework was tutoring (59 percent), followed by additional counseling (44 percent) and academic support classes (39 percent). The types of supports that high schools provided for at-risk students participating in college-level coursework differed by school size, school poverty level, school locale, and graduation rate.
## Exhibit 4. Percentage of high schools that offered college-level coursework to at-risk students and the types of support provided to them, 2014–15

<table>
<thead>
<tr>
<th>Type of support</th>
<th>All schools with college-level coursework for at-risk students</th>
<th>Low grad rate</th>
<th>High grad rate</th>
<th>Large</th>
<th>Small</th>
<th>High poverty</th>
<th>Low poverty</th>
<th>City</th>
<th>Sub-urban</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tutoring</td>
<td>59</td>
<td>53</td>
<td>56</td>
<td>67*</td>
<td>53</td>
<td>66*</td>
<td>51</td>
<td>72*</td>
<td>57</td>
<td>52</td>
</tr>
<tr>
<td>Additional counseling</td>
<td>44</td>
<td>43</td>
<td>43</td>
<td>39</td>
<td>42</td>
<td>45</td>
<td>41</td>
<td>49</td>
<td>42</td>
<td>41</td>
</tr>
<tr>
<td>Academic support classes</td>
<td>39</td>
<td>43</td>
<td>35</td>
<td>44*</td>
<td>36</td>
<td>40</td>
<td>37</td>
<td>49*</td>
<td>39</td>
<td>32</td>
</tr>
<tr>
<td>Adult mentors</td>
<td>31</td>
<td>42*</td>
<td>28</td>
<td>26*</td>
<td>33</td>
<td>35*</td>
<td>26</td>
<td>34</td>
<td>31</td>
<td>29</td>
</tr>
<tr>
<td>Peer mentors</td>
<td>21</td>
<td>18</td>
<td>20</td>
<td>24</td>
<td>20</td>
<td>23</td>
<td>20</td>
<td>25</td>
<td>21</td>
<td>18</td>
</tr>
<tr>
<td>AVID classes</td>
<td>14</td>
<td>6*</td>
<td>13</td>
<td>36*</td>
<td>4</td>
<td>17*</td>
<td>12</td>
<td>21*</td>
<td>16</td>
<td>5</td>
</tr>
</tbody>
</table>

Exhibit reads: Among high schools with college-level coursework for at-risk students in 2014–15, 59 percent offered tutoring to support their participation.

* p < .05.

NOTE: The asterisk is placed on one case per comparison. Differences across school characteristics with two categories were based on comparisons between the two groups. Differences across school characteristics with three categories were based on goodness-of-fit across all three categories.

Unweighted n = 1,100.

SOURCE: HSS Survey of high school administrators, 2015 (Question 51).

### Differences by school size.
Large high schools were more likely than small high schools to offer tutoring (67 percent versus 53 percent), academic support classes (44 percent versus 36 percent), or Advancement Via Individual Determination classes (AVID) (36 percent versus 4 percent) to support at-risk students participating in college-level coursework. Large high schools were less likely than small high schools to offer adult mentors (26 percent versus 33 percent) to support at-risk students participating in college-level coursework.

### Differences by poverty level.
High-poverty high schools were more likely than low-poverty high schools to offer tutoring (66 percent versus 51 percent), adult mentors (35 percent versus 26 percent), or AVID classes (17 percent versus 12 percent) to support at-risk students participating in college-level coursework.

### Differences by school locale.
More city high schools than suburban or rural high schools offered tutoring (72 percent of city high schools versus 57 percent of suburban high schools and 52 percent of rural high schools), academic support classes (49 percent of city high schools versus 39 percent suburban high schools and 32 percent of rural high schools), or AVID classes (21 percent of city high schools versus 16 percent of suburban high schools and 5 percent of rural high schools) to support at-risk students participating in college-level coursework.

### Differences by graduation rate.
Low-graduation-rate high schools were more likely than high-graduation-rate high schools to offer adult mentors (42 percent versus 28 percent) to support at-risk students participating in college-level coursework. Low-graduation-rate high schools were less likely than high-graduation-rate high schools to offer AVID classes (6 percent versus 13 percent) to support at-risk students participating in college-level coursework.
How did high schools deliver college-level coursework?
High schools delivered their college-level coursework to their students in different ways. For example, high schools might offer high-demand AP courses in person but allow some students to take less common AP courses through an online course provider. In some instances, schools might use a blended approach, combining online support with an in-person facilitator, in delivering a course like AP Computer Science A that has a required minimum of 20 hours of computer lab. Most commonly, college-level coursework for high school students was provided in person (89 percent), followed by online only (36 percent), and then as a hybrid model of online support blended with an in-person facilitator (25 percent). There were differences in this delivery mode for college-level coursework by school size, school locale, and graduation rate. There were no significant differences by school poverty level.

**Differences by school size.** Large high schools were more likely than small high schools to offer college-level coursework in person (97 percent versus 82 percent) and less likely to offer college-level coursework online only (20 percent versus 45 percent) or as a hybrid model of online support blended with an in-person facilitator (16 percent versus 30 percent).

**Differences by school locale.** More city and suburban high schools than rural high schools offered college-level coursework in person (91 percent of city high schools and 92 percent of suburban high schools versus 83 percent of rural high schools), while more rural high schools offered college-level coursework online only (51 percent of rural high schools versus 22 percent of city high schools and 30 percent of suburban high schools) or as a hybrid model of online support blended with an in-person facilitator (30 percent of rural high schools versus 20 percent of city high schools and 23 percent of suburban high schools).

**Differences by graduation rate.** Low-graduation-rate high schools were less likely than high-graduation-rate high schools to offer college-level coursework in person (75 percent versus 88 percent).

Where did high schools provide college-level coursework?
High schools offered college-level coursework for high school students in different settings, most likely to accommodate student transportation needs or to follow a program’s design such as with ECHSs that are typically located on a college campus. Most commonly, college-level coursework for high school students was provided at the student’s high school (94 percent), followed by a college campus setting (50 percent), and then at a different high school (10 percent). The setting for college-level coursework differed by school size, school poverty level, school locale, and graduation rate.

**Differences by school size.** Large high schools were more likely than small high schools to offer college-level coursework at the student’s high school (99 percent versus 90 percent).

**Differences by poverty level.** High-poverty high schools were less likely than low-poverty high schools to offer college-level coursework at the student’s high school (92 percent versus 96 percent).

**Differences by school locale.** More city and suburban high schools than rural high schools offered college-level coursework on a college campus (54 percent of city high schools and 53 percent of suburban high schools versus 44 percent of rural high schools).

**Differences by graduation rate.** Low-graduation-rate high schools were less likely than high-graduation-rate high schools to offer college-level coursework at the student’s high school (76 percent versus 96 percent).
Who taught college-level coursework for high school students?
To offer different types of college-level coursework, high schools can draw from a pool of instructors beyond the school itself to teach specific courses. The most common instructors of college-level coursework for high school students were high school teachers (89 percent), followed by college professors (53 percent) and teachers provided by an online course provider (52 percent). There were no differences by school size, school poverty level, school locale, and graduation rate.

Methodology
The National Survey on High School Strategies Designed to Help At-Risk Students Graduate was a survey of 13 high school strategies designed to improve graduation rates among students at risk of dropping out and was administered in the 2014–15 school year. The 13 strategies are: (1) academic support classes, (2) academic tutoring, (3) career-themed curriculum, (4) case management services, (5) college-level coursework, (6) competency-based advancement, (7) credit recovery, (8) early warning systems, (9) high school transition activities, (10) mentoring, (11) personalized learning plans, (12) social services, and (13) student support teams.

The researchers selected a nationally representative sample of high schools using a random sampling approach, stratifying high schools based on graduation rate (from ED Facts) and locale code (from NCES 2013–14 Common Core of Data). The survey collected data from high school principals (or designees knowledgeable about programs and strategies) at sampled schools. The survey response rate was 90 percent. The survey responses, after cleaning and processing, were analyzed in SAS and Stata using descriptive techniques that apply the appropriate statistical population weights to account for stratification by graduation rate and locale.

Results reported in this brief reflect the full survey sample unless otherwise noted and are representative of U.S. public high schools nationwide. References in the text to differences between subgroups based on sample data refer only to differences that are statistically significant using a significance level of 0.05.

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4 All U.S. public high schools providing instruction to 12th grade students in the fall of 2010 were included in the sampling frame unless (1) the lowest offered grade was 11th grade or higher, (2) there were fewer than five students in grades 9 through 12, (3) the percentage of students enrolled in grades 9 through 12 was under 20 percent of the total school enrollment and the total number of students in grades 9 through 12 was fewer than 20, or (4) the school name contained one of nine keywords indicating juvenile detention center or hospital. Of the 103,813 total schools listed in the 2010–11 CCD, 22,447 high schools met the criteria to be included in the sampling frame.

5 There were 3,302 schools without graduation rate information in the 2010–11 EDFacts public use data set. The researchers used an imputation approach to assign these schools to either the high- or low-graduation-rate stratum. The imputation process began by examining the distribution of the high/low graduation rate classification for the 19,145 schools by sampling locale. The percentage of schools classified as high graduation rate was calculated separately for each locale sampling stratum: 68.4 percent of rural schools were classified as high graduation rate, 63.0 percent of suburban schools were classified as high graduation rate, and 41.0 percent of city schools were classified as high graduation rate. The research team randomly assigned each of the 3,302 schools with unknown graduation rates to the high graduation rate stratum with probability 68.4 if the school was classified as rural, with probability 63.0 if the school was classified as suburban, and with probability 41.0 if the school was classified as urban. The sample size was adjusted upwards to account for potential misclassification due to this method. In analysis, the researchers used the restricted-use 2013–14 EDFacts data and graduation rates published on school and district websites to fill in this missing data.
References


### Appendix: College-level Coursework for High School Students (Survey Excerpt)
National Survey on High School Strategies Designed to Help At-Risk Students Graduate

This section asks about **Accelerated Academic Programs**. For the purposes of this survey, accelerated academic programs provide students with the opportunity to experience a postsecondary course or earn college credits while in high school (e.g., Early/Middle College, Advanced Placement [AP], International Baccalaureate [IB], dual enrollment, Cambridge/Advanced International Certificate of Education [AICE]).

<table>
<thead>
<tr>
<th>42. In the 2014-15 school year, does your school have accelerated academic programs?</th>
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<tbody>
<tr>
<td>(Please select only one)</td>
</tr>
<tr>
<td>Yes</td>
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<tr>
<td>☐</td>
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</tbody>
</table>

If user responds “Yes” to Q42, ask Q43 through Q52. Otherwise, skip to Q53.

<table>
<thead>
<tr>
<th>43. Are accelerated academic programs offered to all students (school-wide) or to a specific subset of students?</th>
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<tr>
<td>(Please select only one)</td>
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<tr>
<td>All students (school-wide)</td>
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</tbody>
</table>

If user responds “All students” to Q43, skip to Q46.
If user responds “Subset of students” to Q43, ask Q44 through Q50.

<table>
<thead>
<tr>
<th>44. On average, approximately what percentage of high school students in your school is offered an accelerated academic program in the 2014-15 school year?</th>
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<td>{Slide bar for 0% to 100%}</td>
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<thead>
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<th>45. Are any of the following subsets of students targeted for receiving accelerated academic programs? (Check all that apply)</th>
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<td>Students with attendance issues (e.g., truancy)</td>
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<tr>
<td>Students with discipline or behavioral issues</td>
</tr>
<tr>
<td>Students performing below standards or grade level</td>
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<tr>
<td>Students performing above standards or grade level</td>
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<tr>
<td>Students in a particular grade level, regardless of performance</td>
</tr>
<tr>
<td>Students recommended by high school staff (e.g., counselor or teacher)</td>
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<tr>
<td>Re-entry students</td>
</tr>
<tr>
<td>English Language Learners</td>
</tr>
<tr>
<td>Other</td>
</tr>
<tr>
<td>(Please Specify________________)</td>
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</tbody>
</table>
46. On average, approximately what percentage of high school students in your school participates in an accelerated academic program in the 2014-15 school year? [Slide bar for 0% to 100%]

47. How are accelerated academic programs typically delivered to your students? (Check all that apply)
- Online
- As a classroom course
- Blended learning (e.g., online with an in-person facilitator)

48. Where are accelerated academic programs offered? (Check all that apply)
- At your school
- At another high school
- On a college campus
- In the students’ homes
- At another location (Please specify: ___________)

49. Who leads or facilitates the accelerated academic programs delivered to your students? (Check all that apply)
- A high school teacher, including those certified or hired as a college adjunct
- A college professor
- A teacher provided by the online course provider
- Don’t know
- Other (Please Specify_______________)
50. Are any of the following required for at-risk students to participate in these accelerated courses?
(Check all that apply)

- Does not apply, at-risk students do not participate
- Teacher recommendation
- School administrator or guidance/school counselor approval
- Grade level (e.g., only juniors or seniors may enroll)
- Minimum GPA
- Satisfactory attendance record
- Minimum score on a standardized test or college placement exam (e.g., state test, SAT or ACT)
- Parent involvement (e.g., parent contract)
- Other
(Please Specify________________)

If user responds “Does not apply” in Q50, skip to Q53.

51. Do you provide any of the following supports to facilitate the enrollment and persistence of at-risk students in these courses?
(Check all that apply)

- Adult mentors
- Peer mentors
- Credit recovery
- Tutoring
- Academic support classes
- Additional counseling
- Advancement Via Individual Determination (AVID) classes
- Other
(Please Specify________________)

52. What form of advanced coursework is offered to at-risk students?
(Check all that apply)

- Advanced placement (AP) courses for college credit
- International Baccalaureate (IB), an international curriculum certified by the International Baccalaureate Organizations
- Early college or middle college program (combining high school and college coursework to compress the time it takes to earn both a high school diploma and the first two years of college and/or an associate’s degree)
- Dual high school and college enrollment classes (students earn both high school and college credit)
- Other
(Please Specify________________)

The full survey is available at: [http://www2.ed.gov/about/offices/list/opepd/ppss/reports.html#es](http://www2.ed.gov/about/offices/list/opepd/ppss/reports.html#es)