In the following report, Hanover Research reviews effective practices in increasing high school graduation rates. The first section of the report provides a brief overview of the available literature on increasing graduation rates, and the second section provides an overview of research-supported programs developed to promote students’ on-time graduation. The report concludes with an examination of effective programs implemented in school districts with high graduation rates.
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EXECUTIVE SUMMARY AND KEY FINDINGS

INTRODUCTION

In 2013, high school graduation rates in the United States reached their highest point since the 1970s, according to the most recent calculations by the Editorial Projects in Education Research Center. The graduation rate for the class of 2010 was approximately 75 percent, and the Center projects that the rate soon could exceed 77 percent. However, even with this increase in the graduation rate, the fact remains that approximately one million students leave high school each year without obtaining a diploma. These students will experience significantly-limited career prospects and are likely to earn much less than their counterparts with high school diplomas. This report is intended to provide school districts with a targeted review of effective practices designed to increase high school graduation rates. The report comprises the following three sections:

- **Section I** reviews available literature on the methods school districts can use to improve graduation rates.
- **Section II** profiles four specific strategies supported by research to help students progress through school and graduate.
- **Section III** examines the initiatives used to improve graduation rates at five school districts with exemplary graduation rates over 90 percent.

KEY FINDINGS

- **Improving graduation rates requires an overarching strategic vision for systemic problem-solving.** In general, a systemic approach should include simultaneous pursuit of a combination of targeted and school-wide initiatives. School-wide reforms should ensure that instruction remains rigorous and challenging for students and demonstrate the connection between education and future success. Personalized learning experiences and strong relationships with school staff also contribute to students’ academic success and promote high graduation rates.

- **At-risk students should be identified early in their high school careers and supported with targeted intervention programs before they begin to fall behind.** Interventions are particularly important in ninth grade, which research indicates is the “make or break” year for completing high school. Practical metrics for identifying at-risk students include attendance rates and performance in core courses. School districts should use data systems to track these measures and identify appropriate intervention points.

- **Research-supported programs commonly focus on creating a personalized set of supports for students, supporting students during key transitions, and ensuring**

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that the curriculum remains rigorous and relevant. This report profiles the following successful programs.

- **Career academies** offer relevant, career-centered curricula coupled with small learning communities to create a more supportive, personalized learning environment.
- **Check & Connect** incorporates routine monitoring to track student performance and provides personal guidance to increase these students’ sense of engagement.
- **School Transitional Environmental Project (STEP)** eases freshman students’ transition into high school with teacher mentors and small learning communities.
- **Advancement via Individual Determination (AVID)** emphasizes college readiness and focuses on promoting student achievement.

- **School districts with exemplary graduation rates use a number of proven best practices for promoting high graduation rates.** Programs at these school districts shared similar features in that they:
  - Proactively identify at-risk students
  - Use multiple types of interventions
  - Focus on freshman students
  - Have dedicated teams of staff members to support struggling students

Several of the profiled districts also have created alternative schools with specialized curricula for students who have not succeeded in the traditional high school setting.
SECTION I: LITERATURE REVIEW

EFFECTIVE STRATEGIES IN IMPROVING HIGH SCHOOL GRADUATION RATES

In a review of available research on improving high school graduation rates, Hanover Research has identified the following core practices which may have a positive impact on graduation rates and dropout prevention. Together, these elements reflect an overarching approach incorporating evaluation, problem-solving, and follow-up:

- Developing a strategy for tracking students at greatest risk of dropping out. This includes making use of data systems, ensuring effective record-keeping, and developing metrics to identify appropriate intervention points.\(^2\)

- Practicing both targeted and school-wide interventions early and consistently.\(^3\)
  - School-wide Interventions
    - Personalizing the learning experience for broad student groups;
    - Encouraging student engagement and making instruction relevant.
  - Targeted Interventions (intended for at-risk students)
    - Assigning adult advocates;
    - Providing academic support;
    - Implementing programs that target social adjustment;
    - Communicating regularly with those involved to identify issues and maintain fluid strategies.

- Ensuring lines of communication remain open. Administrators and teachers must work diligently to remind students that they are always approachable. This is, in effect, another early warning system, and it is also an effective way to establish what is or is not working.\(^4\)

IDENTIFYING AT-RISK STUDENTS

According to the National High School Center (NHSC), a federally-funded research organization, “the most powerful predictors of whether a student will complete high school include course performance and attendance during the first year of high school.”\(^5\) The Center stresses the importance of identifying at-risk students early in their high school careers and supporting these students with targeted intervention programs before they fall behind their peers or drop out. Identifying at-risk students is particularly important in the...
ninth grade, where more students fail than in any other academic year. Therefore, school districts should implement systematic data collection efforts to develop an early warning system to ensure students stay on track to graduate.

Attendance and course performance data are practical and easily-measurable tools for identifying students at risk of dropping out. The following table summarizes research-supported indicators of “strong early warning signs displayed in the first year of high school that predict whether students will graduate or drop out.”

**Figure 1.1: Summary of Warning Sign Indicators**

<table>
<thead>
<tr>
<th>TYPE OF INFORMATION</th>
<th>INDICATOR</th>
<th>BRIEF DESCRIPTION</th>
<th>BENCHMARK (RED FLAG)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attendance</td>
<td>Absenteeism rate</td>
<td>Number of days absent during the first 20 days, and each quarter of the first year of high school</td>
<td>The equivalent of more than 10 percent instructional time missed during the first year indicates student may be at risk.</td>
</tr>
<tr>
<td>Course Performance</td>
<td>Course failures</td>
<td>Number of Fs in any semester-long course during the first year of high school</td>
<td>Even one failed course indicates student may be at risk.</td>
</tr>
<tr>
<td></td>
<td>Grade point average (GPA)</td>
<td>GPA for each semester and cumulative GPA</td>
<td>GPA under 2.0 indicates student may be at risk.</td>
</tr>
<tr>
<td></td>
<td>On-track indicator</td>
<td>Combination of the number of Fs in core academic courses and credits earned during the first year of high school</td>
<td>Two or more Fs in core academic courses and/or fewer than one-fourth of the credits required to graduate minus one indicate that student is off-track to graduate.</td>
</tr>
</tbody>
</table>

Source: National High School Center

In April 2007, the Center for Public Education published an overview of research relating to the prevention of dropouts in public high schools. According to the report, identifying potential dropouts accurately is a vital first step in building programs to keep students in school and ensuring their timely progress through school. The report summarizes the types of characteristics, compiled over decades of research, which have been used to identify these students:

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6 Ibid.
7 Ibid.
8 Ibid.
9 Table contents reproduced verbatim from: Ibid.
Demographic background: Students who are poor, who are members of certain minority groups, who are male, who have limited English proficiency, who have learning or emotional disabilities, who move more often, and who are overage for their grade are more likely to drop out.

Family factors: Students who come from single parent families, have a mother who dropped out of high school, have parents who provide less oversight and support for learning, and who have older siblings who did not complete school are more likely to drop out.

Adult responsibilities: Teenagers who take on adult roles such as becoming a parent, getting married, or holding down a job are more likely to drop out—although the last depends on gender, type of job, and number of working hours per week.

Educational experiences: Dropouts are more likely to have struggled academically: Low grades, low test scores, Fs in English or math, falling behind in course credits, and being retained are associated with lower chances for graduation. Dropouts also are more likely to have shown signs of disengagement from school: High rates of absenteeism or truancy, poor classroom behavior, less participation in extracurricular activities, and bad relationships with teachers and peers all have been linked to lower chances for graduation.¹⁰

Despite the common use of these indicators, the Center’s report cautioned that some of the characteristics listed above may be poor predictors because “exhibiting a risk factor places a student in a group whose members are, in general, more likely to drop out, but does not automatically mean that a particular student will drop out.” Of these groups of factors, research suggests that educational experiences, such as course failures or absenteeism, are the best predictors of dropping out, rather than race, poverty, age, gender, and personal circumstances. For instance, a 2006 U.S. Department of Education national survey found that dropouts are twice as likely to cite school-related reasons as family- or work-related reasons for dropping out of school.¹¹

School-Wide Interventions

A significant portion of dropout prevention programs target at-risk students. Although such programs are “essential in preventing dropouts and improving the overall graduation rate of a school,” the Center for Evaluation and Education Policy emphasizes the need for school-wide reform in addition to targeted interventions. Thus, the Center recommends a two-pronged approach incorporating both targeted interventions for at-risk students and comprehensive school reform. The Center stresses that “no school can be entirely successfully in improving graduation rates without a strong focus on relationships, relevance, and rigor,”¹² which can be summarized as follows:

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¹¹ Ibid.


- **Relationships:** Students should feel included in the school community and have a strong relationship with at least one adult in the school. Compared to high school graduates, students who leave high school early are more likely to express that they felt uncomfortable approaching a staff member with a school-related or personal problem.  

- **Relevance:** Students should feel that their high school education is relevant to their future after graduation. Students typically recognize that their high school education is important to their future, but many fail to see the intrinsic value of the educational experience in itself. In a survey of nine high schools which had improved their graduation rates, the Southern Regional Education Board (SREB) found that all nine schools had developed programs which “emphasize the connections between high school and college and careers.”

- **Rigor:** A survey of high school dropouts suggests that, although many were struggling academically, dropouts did not necessarily leave high school due to academic challenges. Instead, many students reported feelings of boredom and disengagement in school. For instance, 70 percent of students indicated that they would be capable of graduating if they had tried, and similar numbers expressed that they would have tried harder had it been expected of them.

The National Education Association provides similar recommendations for school-wide reform, emphasizing personalization, rigorous and relevant instruction, and intensive supports for students:

- **Personalization:** Small learning environments; caring, long-term relationships between students and adults; student advisory and counseling systems; and effective connections between the school and students’ families.

- **Rigorous and relevant curriculum and instruction:** High academic expectations; curriculum that connects to students’ lives, cultures, and communities; career and technical education; partnerships with higher education; interdisciplinary courses; and project- and community-based learning.

- **Substantive assistance to students:** Teacher collaboration to address the needs of individual students and plan ways to support students; additional academic classes and/or extended learning time; and out-of-classroom assistance, such as one-on-one tutoring.

- **Qualified instructional staff:** Skilled and knowledgeable teachers and education support professionals who are expert in their subject matter, the needs of diverse learners, and the learning process.

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13 Ibid., p. 2.
14 Ibid., pp. 2-3.
15 Ibid., p. 3.
**Targeted Interventions**

Targeted interventions are those programs and strategies which are directed to reach specific grade levels or groups of at-risk populations, as identified by key dropout indicators. The National Dropout Prevention Center/Network has identified 15 strategies that have “the most positive impact on the dropout rate.” These strategies can be placed into four groups, which are summarized in the table below.

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**Figure 1.2: Summary of Targeted Interventions**

<table>
<thead>
<tr>
<th>STRATEGY</th>
<th>DESCRIPTION</th>
<th>EXAMPLES</th>
</tr>
</thead>
</table>
| **Basic Core Strategies** | Targets elementary, middle, and high school students in at-risk situations. The goal of these strategies is to provide meaningful learning opportunities to ensure that students are engaged in their learning environment and continue on the path towards graduation. | ○ Mentoring/Tutoring  
○ Service-Learning  
○ Alternative Schooling  
○ After-School Opportunities |
| **Early Interventions** | Assists in identifying attitudes and behaviors indicative of later dropout during the early stages of education. Problems associated with attendance and truancy often begin in elementary school. Identifying these behaviors and attitudes in early grades is imperative to changing them before they are deeply entrenched and therefore much more difficult to alter. | ○ Increasing Family Engagement  
○ Implementing Early Childhood Education  
○ Promoting Early Literacy |
| **Making the Most of Instruction** | Focuses on dynamics and teaching within the classroom. This strategy is based on addressing different learning styles, increasing the knowledge and skills of teachers, and utilizing technology to increase learning and attendance. | ○ Enhanced Professional Development  
○ Active Learning Strategies  
○ Increased Educational Technology  
○ Individualized Instruction Programs  
○ Career and Technology Education |
| **School and Community Perspective** | Considers the fact that schools do not operate independently of their environment, but rather as part of a larger integrated community. Therefore, community and business support is a crucial component of improving attendance and reducing dropout rates. | ○ Continual, Systemic Renewal  
○ School-Community Collaboration  
○ Safe Learning Environments |

Source: Texas Education Agency

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As these strategies demonstrate, effective targeted intervention programs can take a variety of forms and be implemented throughout all stages of a student’s education. The next section of this report examines in greater detail four research-supported strategies for fostering increased graduation rates, including both targeted and school-wide interventions.
SECTION II: RESEARCH-BASED PROGRAMS

This section presents detailed information on programs with demonstrated effectiveness in promoting the on-time graduation of high school students. Hanover Research identified programs in this section through a review of state education resources, the What Works Clearinghouse (WWC), and the National Dropout Prevention Center/Network (NDPC).

CAREER ACADEMIES

Career academies are school-within-school programs in high schools that offer curricula based around a specific career path or theme. By providing students with employment experience through school-employer partnerships, career academies help at-risk students prepare for post-graduation employment. Initially geared primarily toward students at high risk of dropout, career academies have since broadened their focus to include other students as well.

Most career academies have similar features, in that they:

- Operate as “small learning communities” (SLCs) to create a more supportive, personalized learning environment;
- Combine academic and career/technical curricula around a career theme to enrich teaching and learning; and
- Establish partnerships with local employers to provide career awareness and work-based learning opportunities for students.

Career themes used in these academies can include health care, finance, technology, communications, public service, or business, among others. Career-related courses are typically taught by a core set of instructors within the academy, while relationships between the academy and local employers can provide students with access to mentors, internship opportunities, and real-world experience in their chosen fields.

The small learning communities emphasized in career academies create a strong sense of support among students and teachers, and research has found that students in career academies do in fact “receive more personal attention and support from teachers, compared to non-academy students.” As noted in the first section of this report, such relationships can be a critical factor in preventing dropouts and increasing graduation rates.

21 Ibid.
EVIDENCE OF SUCCESS

The largest study of career academies to date, by MDRC, an independent research organization, showed that participation in a career academy may have a slightly positive impact on a variety of academic outcomes, including attendance, earned credits, grade point average, and graduation rates.24 Perhaps most notably, the MDRC study showed that high-risk students who participated in career academies completed a core academic curriculum at double the rate of their peers, with a 32 percent completion rate among academy students compared to 16 percent for the non-academy comparison group.25

The one study that met WWC evidence standards showed “a positive and statistically significant effect on dropping out.”26 By the time of graduation, 11 percent more academy students graduated than non-academy students. Students also progressed well through school when they participated in an academy program. By graduation, academy students also had achieved more academically, as evidenced by a higher number of credits taken. In addition, a higher percentage of academy students had met the overall credit requirements for graduation on time than non-participants.27

CHECK & CONNECT

Designed in 1990 at the University of Minnesota, the Check & Connect system is one of three projects that aimed to address the dropout problem among students with emotional and behavioral disabilities.28 The Check & Connect program:

Uses a systematic method of checking for off-track indicators (such as course failures, tardiness, missed classes, absenteeism, detention and suspension) to determine which students are at risk of dropping out and then connecting with those students through academic support, by in-depth problem solving, and by coordinating with community services.29

The Check & Connect model enhances engagement through seven key program components:

1. Relationship building
2. Routine monitoring and alterable indicators
3. Individualized and timely intervention
4. Long-term commitment

25 Ibid., p. 4.
27 Ibid., p. 10.
5. Persistence plus
6. Problem solving
7. Affiliation with school and learning.\textsuperscript{30}

The Check & Connect system assigns each student a “monitor” who regularly reviews that student’s performance and intervenes should the student exhibit problem behaviors, such as poor attendance or disciplinary issues. The monitors also coordinate services for students, advocate for them, and provide them with feedback and encouragement. The monitors further extend the school’s outreach services to students’ families.\textsuperscript{31}

As the name of the model suggests, the Check & Connect intervention consists of two main components. The “check” component of the model involves careful monitoring of a number of different indicators, such as attendance and educational progress.\textsuperscript{32} The “connect” component involves two different levels of intervention services. “Basic” interventions are the same for all students and begin with introductions and the sharing of general information about the monitor’s role and the Check & Connect model with the student and his/her family. The monitors interact regularly with students – at least weekly at the secondary level and up to daily at the elementary level.\textsuperscript{33}

The monitors also participate in regular conversations with students – at least monthly for secondary students and weekly for elementary students. In these conversations, the monitors discuss the students’ academic progress, “the relationship between school completion and the ‘check’ indicators of engagement, the importance of staying in school, and the problem-solving steps used to resolve conflict and cope with life’s challenges." The monitors further guide students through problem-solving strategies using a cognitive-behavioral approach, as outlined below.\textsuperscript{34}

1. Stop. Think about the problem.
2. What are the choices?
3. Choose one.
4. Do it.
5. How did it work?\textsuperscript{35}

Aside from these basic interventions, the monitors also may initiate “intensive” interventions for certain students who demonstrate a high risk of early school withdrawal.

\textsuperscript{32} “Check & Connect: A Comprehensive Student Engagement Intervention.” University of Minnesota. http://checkandconnect.umn.edu/
\textsuperscript{33} “What is Check & Connect.” Putnam County Educational Service Center. p. 3. http://putnam.noacsc.org/interventiondatabase/Behavior/Interventions/Other%20Behavior%20Interventions%5CCheck%20and%20Connect.doc
\textsuperscript{34} Ibid., p. 3.
\textsuperscript{35} Ibid., pp. 3-4
Such intensive services should, where possible, leverage existing school services so as to minimize redundancies. At the elementary level, examples of intensive interventions include morning telephone calls to ensure that students will be in school that day, assistance with the application of organizational skills, and programs that work with both students and parents to teach effective strategies for homework completion. In middle and high school, examples of intensive interventions include: collaborative work with students with disabilities and their parents to plan transitions and to facilitate interagency participation; role playing activities to advance social and behavioral competence, such as walking through problem solving and conflict management scenarios; and in-school support programs that reduce the use of out-of-school suspension and administrative transfers.36

**Evidence of Success**

According to a 2004 publication by the National Center on Secondary Education and Transition, four longitudinal research studies have been conducted on the Check & Connect system, all of which featured at least some students with disabilities. Overall, the outcomes of these studies indicate that the Check & Connect system decreases dropout rates and truancy rates and increases credit accrual and school completion.37 As one example, a study that spanned from 1996 to 2001 and involved students with emotional and behavioral disabilities in grades 9-12 found that more students from the participant group stayed in school than in the control group. Additionally, “more students in the participant group completed school or were within one year of completing as of June 2000 than students in the control group.”38 According to the WWC’s 2006 review of previously-conducted research studies, the Check & Connect system was found to have positive effects on students’ persistence in school and potentially positive effects on students’ progression in school.39

Since the beginning of the Check & Connect program in the late 1990s researchers have linked Check & Connect to a number of positive outcomes related to student engagement, including attendance, course failure rate, promotion, and graduation rates. Specific research findings include the following:

- **As a sustained intervention, Check & Connect improves enrollment, attendance, and odds of graduation for students who are disengaged and at risk of dropout.** Ninety four students in special education who had received Check & Connect for 2 years in middle school were randomly assigned to treatment and control groups upon entrance to 9th grade. By the end of 9th grade, treatment group students were significantly more likely than control group students to be enrolled in school (91% vs. 70%), to have persisted in school with no periods of 15-day absences (85% vs. 64%), and to be on track to graduate within five years (68% vs. 29%).

- **Check & Connect improves persistence, enrollment, access to relevant educational services, student involvement in IEP transition planning, and attendance for students**

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36 Ibid., p. 4.
38 Ibid.
with emotional/behavioral disabilities. 175 9th grade students with emotional/behavioral disabilities were randomly assigned to treatment and control groups (11 did not participate due to mobility or other factors) and received the intervention for 4-5 years. Check & Connect treatment students were less likely to drop out of school than students in the control group at the end of 4 years (39% vs. 58%) and at the end of 5 years for a subsample of students (42% vs. 94%).

- **Check & Connect improves outcomes for students with a history of truancy.** In a pre-post intervention design, 363 chronically truant secondary students showed improved attendance and academic performance as well as a reduction in the number of skipped classes and out-of-school suspensions. About 65% of Check & Connect students who were referred before their absences exceeded 25% of the school year were successfully engaged (defined as less than 0-1 days absent per month), with no incidences of course failure.40

**SCHOOL TRANSITIONAL ENVIRONMENTAL PROJECT (STEP)**

The School Transitional Environmental Project (STEP) program is a dropout prevention program designed to “identify students at-risk for potential problems at predictable school transition times (e.g., from elementary school to junior high, or junior high to high school) and help them through those transitions.”41 The program looks to ease students’ transition into high school, as freshman students often have trouble making the academic adjustment from middle to high school. For instance, high school freshmen are five times more likely to fail a class than students in other grades, and most high school dropouts fail at least 25 percent of their ninth grade courses.42 In addition to high dropout rates and academic failures, high schools frequently struggle with increased disciplinary issues, truancy, and other behavioral problems among freshmen.43 The STEP program is only implemented in students’ transition year, either from middle school to high school or from elementary school to middle school.44

Within the program, the homeroom teacher role is restructured to function as the “administrative-counseling” connection between all stakeholders at the school, including students, parents, and school administration. Homeroom teachers assist students in choosing classes and serve as personal counselors to students throughout their first year in high school. Teachers participating in STEP meet regularly to identify at-risk students who may require additional support from teachers and staff and serve as liaisons to parents of

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the students. The role of the homeroom teacher was redesigned to increase students’ sense of belonging and their support resources, specifically:

- To make the transitional task of acquiring and reorganizing formal support less difficult and to increase the amount of support students receive and perceive being available from school staff.
- To reduce the difficulty with which students can gain access to important information about school rules, expectations and regularities.
- To increase students’ senses of accountability and belongingness, and to reduce their senses of anonymity.
- To increase the extent to which teachers are familiar with students and to reduce the overload that teachers often experience in gaining familiarity with large numbers of entering students.

The STEP program also reorganizes the school social system to form small learning communities for freshman students. STEP students are assigned to classes so that their core academic courses are taken only with other students in the program. Typically, students are divided further into small groups (between 60 and 100) as a STEP team. This restructured school environment is designed to increase a sense of constancy for students and decrease the social and physical complexity of the high school experience. Program classrooms are also placed in close physical proximity to increase “informal interaction” between students and teachers and limit exposure to social pressures from older high school students.

Evidence of Success

The National Dropout Prevention Center recognizes the STEP program as a model dropout prevention program, and multiple studies have demonstrated the program’s effectiveness in easing students’ transition to high school and promoting increased graduation rates. In the initial pilot study of the program, students in the STEP program had significantly higher grades than the control group and experienced increased attendance and self-confidence. More importantly, students in the STEP program dropped out of school at a significantly lower rate than their peers, at 21 percent versus 43 percent.

Studies examining STEP’s effectiveness have found that students in the program report significantly lower levels of stress and tend to “act-out” less in the classroom. In addition, research suggests that the STEP program is associated with higher levels of job satisfaction and lower levels of burn-out for teachers.

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45 Bulleted items taken verbatim from: Ibid., p. 2.
46 Ibid., p. 2.
47 Ibid.
Overall, these studies suggest that STEP is effective at creating a more inclusive, less stressful, more supportive environment for transitioning cohorts of students. Within the context of this environment, students are less likely to suffer emotional (e.g., depression, anxiety, low self-esteem), behavioral, and academic problems.51

The Idaho Department of Education indicates the difficulty level in implementing the STEP program is “low to moderate,” noting that the program is “relatively amenable to implementation” and that STEP “appears to be reasonably self-sustaining over time.”52

ADVANCEMENT VIA INDIVIDUAL DETERMINATION (AVID)

The AVID (Advancement via Individual Determination) program is designed for fourth- through twelfth-graders and aimed at preparing students “in the academic middle” for four-year college eligibility.53 Students in the “academic middle” are in the “B, C, and even D” range and are typically the first in their families to attend college.54

AVID aims to create a culture of college readiness, with a particular focus on historically-underserved students of moderate academic ability.55 The program also targets traditionally-disadvantaged groups, including minority and low-SES students. Many districts offer AVID exclusively at the high school level; however, the program promotes district-wide implementation to lay the foundation for higher achievement as early as elementary school. AVID District Director Robin Withers, of Cherry Creek School District (Colorado), has highlighted the benefits of an approach that targets students in the early years, noting that:

For elementary students, we see them definitely more prepared for middle school, so the transitional skills are a major factor. At the middle level, we see an increase in accelerated and honors courses offered throughout the school, because of increased AVID participation . . . Our graduating classes now show over 95% of our AVID students going on to four-year colleges and universities.56

EVIDENCE OF SUCCESS

While only one study of AVID meets WWC standards (with the body of evidence too small to produce definitive conclusions),57 studies have found that the AVID program is effective in producing college-ready students. AVID itself reports that, in 2011-2012, 90 percent of participating seniors (n=33,204) in the United States applied to a four-year college, and 76 percent were ultimately accepted.58

51 Ibid., p. 2.
52 Ibid., p. 3.
53 “AVID 101 (Introduction).” AVID. Available at: http://www.fcps.edu/FallsChurchHS/avid/pdf/AVID%20101.pdf
54 Ibid.
55 “What is AVID?” AVID. www.avid.org/abo_whatisavid.html
58 “Data and Results.” AVID. http://www.avid.org/abo_dataandresults.html
An independent study of AVID in 2004 found similarly-positive outcomes. Researchers investigated AVID’s impact at 10 Texas high schools that implemented the program in the 1999-2000 school year, assessing both the achievement of AVID participants relative to their peers and the high schools’ performance in Texas’ accountability rating system. At these schools, the AVID program involved a challenging curriculum, an elective class for program participants to provide academic and social support, and mentors who guided participants through the college application process.  

Researchers analyzed three years of student achievement data for the 10 participating high schools. Attendance rates for AVID students were higher in all three years, and AVID students consistently outperformed their non-AVID classmates on standardized tests. By 2002, over 97 percent of AVID participants were on track to graduate, over 35 percent more than their non-participant peers.

These individual improvements raised the overall achievement of the schools offering AVID programs, which improved their performance on math and reading tests more rapidly than average compared to all Texas high schools. All 10 schools also improved their Texas accountability ratings over the three-year period investigated in the study, suggesting that the benefits of AVID implementation permeate the student body as a whole.

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60 Ibid, p. 248.
61 Ibid, pp. 251-252.
64 Ibid., pp. 254-255
SECTION III: DISTRICT PROFILES

The final section of this report examines the initiatives used to improve graduation rates at five school districts that have exemplary graduation rates (>90 percent) and have implemented targeted programs to achieve these outcomes.

A number of the strategies used in these districts share similar features in that they:

- Proactively identify at-risk students
- Use multiple types of interventions
- Focus on freshman students
- Have dedicated teams of staff members to support struggling students

In addition, several of the profiled districts have created alternative schools with specialized curricula for students who have not succeeded in the traditional high school setting.

Figure 3.1 shows the districts profiled in this section. In researching these districts’ practices, Hanover Research used publicly-available information, as well as interviews with contacts from two school districts—Dare County Schools and Pamlico County Schools.

**Figure 3.1: School Districts with Four-Year Graduation Rates over 90 Percent**

<table>
<thead>
<tr>
<th>DISTRICT</th>
<th>TOTAL GRADUATES</th>
<th>NUMBER OF STUDENTS</th>
<th>GRADUATION RATE (PERCENT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pamlico County Schools</td>
<td>117</td>
<td>126</td>
<td>92.9</td>
</tr>
<tr>
<td>Chapel Hill-Carrboro City Schools</td>
<td>813</td>
<td>878</td>
<td>92.6</td>
</tr>
<tr>
<td>Dare County Schools</td>
<td>338</td>
<td>370</td>
<td>91.4</td>
</tr>
<tr>
<td>Catawba County Schools</td>
<td>1,288</td>
<td>1,411</td>
<td>91.3</td>
</tr>
<tr>
<td>Union County Public Schools</td>
<td>2,646</td>
<td>2,913</td>
<td>90.8</td>
</tr>
</tbody>
</table>

Source: Public Schools of North Carolina

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DARE COUNTY SCHOOLS

Dare County Schools is located on the eastern coast of North Carolina and serves a total of 4,994 students. The four-year overall graduation rate for the district is 91.4 percent. First Flight High School, the largest of the district’s three high schools, has experienced graduation rates of approximately 95 percent for the past three years.

Principal Arty Tillett attributes this success to a combination of six targeted programs designed to identify students who struggle early and prevent them from falling behind. Tillett stresses that none of these programs is a “magic bullet” for improving graduation rates, and he firmly believes a combination of different approaches is necessary to generate consistently high graduation rates. The following table outlines the numerous strategies used by First Flight High School to ensure that all students graduate “on time, college and/or career ready,” along with indicators of success. These strategies are also employed by Manteo High School, the second largest high school in Dare County, which works closely with First Flight to ensure systematic implementation of initiatives.

Figure 3.2: Strategies Promoting Increased Graduation Rates, First Flight High School

<table>
<thead>
<tr>
<th>STRATEGY</th>
<th>INDICATOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implement Freshman Academy initiatives.</td>
<td>Number of students in year-long versus semester core classes</td>
</tr>
<tr>
<td>Create a master schedule that reflects 9th graders scheduled in a common area for core classes.</td>
<td>Number of daily interventions required</td>
</tr>
<tr>
<td>Use the hybrid schedule to assist those students who have both strengths and weaknesses.</td>
<td>Number of students on the hybrid schedule</td>
</tr>
<tr>
<td>Schedule focused interventions for struggling learners on a weekly basis.</td>
<td>Number of daily interventions required</td>
</tr>
<tr>
<td>Schedule common planning time for freshmen core teachers.</td>
<td>Amount of common planning time for freshman core teachers</td>
</tr>
<tr>
<td>Utilize a pyramid of interventions to ensure all students meet standards for promotion.</td>
<td>Number of students meeting standards for promotion</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STRATEGY</th>
<th>INDICATOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Utilize daily intervention time for any student not performing at &quot;C&quot; or above in any course.</td>
<td>Increase in student growth and performance in all areas and sub groups.</td>
</tr>
<tr>
<td>Use Problem Solving Team (PST) for determining intervention strategies for students encountering academic or behavioral problems.</td>
<td>Number of PST meetings held</td>
</tr>
<tr>
<td>Use staff development time to continue teaching AVID teaching strategies to all teachers.</td>
<td>Number of teachers trained in AVID strategies</td>
</tr>
<tr>
<td>Use the Positive Behavior Support system to create a positive and inviting classroom environment and reduce negative behaviors and discipline referrals.</td>
<td>Number of discipline referrals</td>
</tr>
</tbody>
</table>

Source: Dare County Schools

Principal Tillett described six of these measures to Hanover Research in further detail, including the school’s Freshman Academy, professional learning communities, problem solving team, and pyramid of early interventions. Tillett notes that it generally takes at least three years for any initiative to be fully implemented with fidelity, and he encourages schools to begin the implementation of any program through a team of core influential leaders in the school to encourage teacher buy-in.

Tillett describes First Flight High School’s Freshman Academy as “a very intentional focus on [the school’s] 200 freshmen.” At First Flight, the entire freshman schedule is centered on the Academy to ensure that freshman teachers have common planning time. These teachers use their daily planning time to meet as a team, examine individual student performance, and discuss challenges faced by individual students. Teachers also use this time to create common formative assessments and discuss instructional practices.

In addition, the school is also organized by groups of professional learning communities (PLCs), grouped by subject area. Within the PLC program, subject area teachers meet weekly to plan common assessments and discuss student data, which Tillett refers to as “sacred time.” Instructors then can compare student performance, identifying concepts that may need to be re-taught to individuals or groups of students. PLC teams also work together to make decisions about course pacing and testing. Tillett indicates that PLCs are heavily data-driven and use student data as the basis for all of their team decisions.

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70 Ibid.
71 Ibid.
Tillett also emphasizes the importance of identifying at-risk students early, instead of waiting until students are “too far behind to catch up.” Initially, the school implemented both after school and before school programs as early interventions for struggling students. These programs were unsuccessful due to scheduling and logistical issues, as the intervention program conflicted with students’ after school activities and interfered with the school bus schedule. After this program’s failure, the school implemented a mid-day intervention known as the Empower program. The Empower program is built into the regular school day and provides at-risk students dedicated time to receive more intensive teacher supports. Students may use Empower time to retake a test, cover material from a missed class, or receive extra tutoring. Students are referred to the program by classroom teachers, who work to proactively identify students at-risk of falling behind. For example, if a student has missed two days of class due to an illness, the teacher may choose to send the student to the Empower period to cover any missed material, ensuring that the student remains on track academically.  

An adjusted class schedule is credited with improving high school graduation rates and fostering student success. In a traditional block schedule, students take four courses in their fall semester, followed by four different courses in the spring. This scheduling means that there are no year-long courses, and students may go several months without receiving any kind of instruction in a given subject area. For example, a student who takes algebra in the fall of their freshman year may not take geometry until almost a year later in the fall of their sophomore year. First Flight High School noticed that this gap in instruction was causing many students in struggle academically and, in turn, modified its student schedule to ensure that students receive continuous instruction in sequential courses such as math and foreign language.

A pyramid of interventions also has been implemented to address large numbers of struggling students and identify those needing more intensive supports. The Empower program forms the base of this pyramid and serves to identify a large number of students. If students continue to fall behind in class, the school’s Problem Solving Team works together to focus on that individual student. This team—consisting of the student’s teachers, a school psychologist, a career planner, and the school guidance counselor—attempts to pinpoint the reasons for a particular student’s failure and follows those through with “proven strategies” addressing these reasons.

Finally, the school also has implemented the AVID program in all classrooms, using a number of “proven strategies which enable student success.” AVID instructional strategies

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72 Ibid.
73 Ibid.
74 Ibid.
are used throughout the day in all classrooms. Examples of AVID approaches used by First Flight High School include the Cornell method of note-taking and Fishbowl, an “improved Socratic seminar method to promote high-level thinking.” Tillett indicates that the cost of implementing the program is relatively minimal; staff training in AVID strategies is the only cost associated with the program. Instead of sending all instructors to yearly AVID training, the school chooses to save money by training an AVID team to deliver instruction to the rest of the instructors.75

PAMLICO COUNTY SCHOOLS

Pamlico County Schools (PCS) is located in the eastern coastal region of the state and serves a total of 1,483 students.76 The district achieved the third-highest four-year graduation rate in the state of North Carolina in 2013, with 117 of 126 students (92.9 percent) graduating within four years. In the 2012-2013 school improvement plan, the district stated its goal of attaining a 90 percent four-year graduation rate and outlined specific strategies to achieve this goal, namely:

- **At-risk students are identified through attendance, grade, and discipline reports**, generated by the NCWISE data manager.77
- **A Student Services Management Team (SSMT) meets twice a month with at-risk students to assess individual needs and provide services.** During the meetings, students work with the SSMT committee to “discuss why they are having problems and look for solutions.”78
- **A Success Coordinator provides services for at-risk students.** Students may be referred from the SSMT, or the Success Coordinator can seek out students in need.79 The Success Coordinator is placed in the high school and provides individual counseling to at-risk students on the importance of earning a high school diploma.80
- **A Child and Family Support Team provides services for students experiencing both academic and family issues.** The school social worker and nurses seek out students in need of assistance; teachers and other agencies also may make referrals to the Child and Family Support Team.81
- **PCS provides a 21-credit diploma option** (developed by the state of North Carolina) for eligible students.82 To be eligible for the program students must meet two or more of the following conditions: chronic truancy, chronic

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75 Ibid.
78 Ibid., p. 11.
79 Ibid., p. 12.
82 Ibid., p. 12.
behavior problems, academic/credit deficiencies, previous dropout, retained at least once, and environmental, psychological, and/or physical challenges (e.g., substance abuse, pregnancy).83

Wanda Dawson, the Superintendent of Pamilco County Schools, believes that the Success Coordinator position in particular has been essential in improving the district’s graduation rate. The year before the coordinator was hired, the district experienced 42 student dropouts; this number was cut in half in the two years after the coordinator was hired. In addition, Dawson highlights the Pamlico Alternative to Suspension (PASS) program, a substitute to traditional suspension which ensures that students do not fall behind when suspended. This program is facilitated by the Success Coordinator, who provides students with the work they miss in class.84

Similar to Dare County Schools, Pamlico County is committed to intervening early with students and proactively addressing disruptions in students’ lives. At Pamlico County, this means a strong emphasis on attendance, as the district firmly believes that students who go to class are more likely to graduate. A juvenile attendance council, comprising teachers, law officials, and school administrators, works with students with over 10 absences to create a plan for getting on track to graduate. Additionally, Pamlico County provides home-bound services for sick or pregnant students to ensure that these students do not fall behind their peers.

Pamlico County High School also has implemented the GEAR UP program, a grant program funded by the U.S. Department of Education to “increase academic performance and preparation for postsecondary education; increase the rate of high school graduation and participation in postsecondary education; and increase GEAR UP students’ and their families’ knowledge of postsecondary education options, preparation, and financing.”85 North Carolina is a state grantee for the national program and has developed its own set of state standards for implementing GEAR UP locally.86

Pamlico County’s school improvement plan indicates that the primary GEAR UP activities in the district are centered on college trips for rising twelfth graders and sessions for their parents.87 However, GEAR UP North Carolina has identified a number of additional services required of all districts implementing the GEAR UP North Carolina program, as shown in the figure below.

86 Ibid.
### Figure 3.3: GEAR UP North Carolina Required Services

<table>
<thead>
<tr>
<th>Required Service</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comprehensive mentoring</td>
<td>A one-on-one, long-term, structured mentoring program that pairs an identified academically and/or social/emotionally at-risk student with an older student or adult (typically one hour per week) either during or after the school day.</td>
</tr>
<tr>
<td>Counseling</td>
<td>Meeting with students one-on-one or in a small group to discuss personal growth areas that are possible barriers to enrolling in postsecondary education.</td>
</tr>
<tr>
<td>Advising</td>
<td>Providing individual assistance to students on college options, college match, or college planning and/or enrollment in rigorous coursework.</td>
</tr>
<tr>
<td>Academic planning</td>
<td>Providing individual or small group assistance to students on rigorous coursework selection, course of study choices, college major selection, EXPLORE, PLAN, PSAT, SAT, or ACT advising or interpretation of scores, or assistance with placement tests.</td>
</tr>
<tr>
<td>Career counseling</td>
<td>Providing individual or small group assistance to students and/or families about career choices, career planning, internships, or career interests.</td>
</tr>
<tr>
<td>Financial aid counseling/advising</td>
<td>Meeting with students and/or families one-on-one or in a small group to discuss financial aid options, FAFSA completion, scholarship applications, financial aid or literacy presentations, financial aid or literacy curriculum, financial planning, or college savings information.</td>
</tr>
<tr>
<td>College visit &amp; shadowing</td>
<td>A physical visit to a college campus by a student which should include an official campus tour, shadowing of a current students, presentation(s) by admissions and other college departments.</td>
</tr>
<tr>
<td>Job site visit/shadowing</td>
<td>An individual or small group experience in which students visit a place of employment to learn about specific jobs or careers and the skills and education required.</td>
</tr>
<tr>
<td>Summer programs</td>
<td>Any GEAR UP NC enrichment program held during the summer. Summer programs may include college visits, academic instruction, tutoring, job shadowing, residential programs, experiential education and/or college planning workshops.</td>
</tr>
<tr>
<td>Educational field trip</td>
<td>Activities that have academic enrichment as a fundamental purpose. (e.g., a science demonstration on a college campus)</td>
</tr>
<tr>
<td>Workshops</td>
<td>Group presentations aligned to GEAR UP’s goals and objectives (e.g. financial aid, college choice, etc.)</td>
</tr>
<tr>
<td>Family events</td>
<td>Often held during the evening, family events are to encourage family engagement in students’ success towards postsecondary education</td>
</tr>
</tbody>
</table>

Source: Gear Up North Carolina

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88 Table contents adapted from: “Required Services – GEAR UP North Carolina.” The University of North Carolina. July 19, 2012. [https://www.northcarolina.edu/gearup/implementation_guide/GEAR_UP_NC_Exhibit_1.3_Required_Services.pdf](https://www.northcarolina.edu/gearup/implementation_guide/GEAR_UP_NC_Exhibit_1.3_Required_Services.pdf)
CHAPEL HILL-CARRBORO CITY SCHOOLS

Chapel Hill-Carrboro City Schools (CHCCS) enrolls a total of 11,709 students across its 19 campuses. The 2008-2013 strategic plan states the district’s goal of increasing the cohort graduation rate by at least one percentage point each year to reach 100 percent by the year 2013. To achieve this goal, the district implemented “systematic prevention and intervention strategies” at all schools, which include:

- A pyramid of interventions to support students experiencing difficulties.
- Successful transitions into kindergarten, between elementary, middle, and high schools, and post-graduation.
- Strategies to prevent drop-outs.

CHCCS also has worked to implement and expand alternative programs for high school students. Phoenix Academy serves 35 to 45 students between ninth and twelfth grades as the designated alternative school for the district. The Academy incorporates service learning into the curriculum to connect academic learning with community service experience and foster “personal growth and civic responsibility.” The message of the school—“where success is made simple and education is personalized”—demonstrates Phoenix Academy’s commitment to providing differentiated and individualized instruction to all students.

CHCCS also employs the Bridge Program, a half-day program on the campus of Chapel Hill High School which serves students who are having “academic, social, and emotional difficulties in the traditional school setting.” Students participating in the program must have a mental health diagnosis and currently be receiving mental health services. These students work with a mental health specialist and an education specialist to receive customized counseling to work toward their educational goals. Students are referred to the program by their home high school’s Student Support Team.

92 “The Bridge Program.” Chapel Hill Carrboro City Schools. https://sites.google.com/a/chccs.k12.nc.us/the-bridge-program/
93 Ibid.
CATAWBA COUNTY SCHOOLS

Catawba County Schools (CCS), located one hour northwest of Charlotte, has a total enrollment of 17,370. The district graduated 1,288 of 1,411 seniors in 2013, for a 91.3 percent four-year graduation rate. In the 2009-2014 strategic plan, the district identifies increasing the graduation rate as a primary goal, namely that 100 percent of students will graduate by the 2014 school year. To work toward this goal, CCS targets at-risk students beginning in ninth grade to provide additional, tailored supports. The following table outlines the district’s plan to increase graduation rates:

Figure 3.4: Action Plan to Increase Graduation Rates, Catawba County Schools

<table>
<thead>
<tr>
<th>ACTION STEP</th>
<th>RESEARCH-BASED RATIONALE</th>
<th>YEARLY TARGETS</th>
<th>MONITORING SYSTEMS</th>
<th>RESOURCES</th>
<th>PERSONS RESPONSIBLE FOR OVERSIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide targeted interventions in study skills, test-taking strategies, and math and reading remediation for students who do not demonstrate academic progress in ninth grade.</td>
<td>Studies show that individualizing the student’s academic plan greatly impacts his/her ability to succeed academically.</td>
<td>Year 1: 83% of students will graduate. Year 2: 87% of students will graduate. Year 3: 90% of students will graduate. Year 4: 95% of students will graduate.</td>
<td>NC WISE data will assist in tracking identified students on a semester and annual basis.</td>
<td>Counseling center staff; Student Intervention Team members; Various study skills programming; Teachers and staff.</td>
<td>Assigned high school counselor; Administrators; Classroom teachers.</td>
</tr>
</tbody>
</table>

Source: Catawba County Schools

Catawba County Schools also has created the E.S.T.E.E.M. Academy (Empowering Students Through Education, Employment & Mentorships) as a targeted intervention program for students at risk of dropping out. Students must attend the Academy for a minimum of 45 days before returning to their home school. At the E.S.T.E.E.M. Academy, students earn the right to return to their home school by earning points in each class for cooperation, oral communication, being respectful of themselves and others, being responsible for attendance and punctuality and staying on task, maintaining a positive attitude, and obeying rules for safety.

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96 Table contents reproduced from: Ibid.
**Union County Public Schools**

Union County Public Schools (UCPS), located southeast of Charlotte, serves approximately 40,958 students and has one of the state’s highest graduation rates among larger districts, graduating just over 90 percent of its four-year cohort in 2013. This is up from 77.2 percent in 2007.99

The district’s high graduation rate is the result of several deliberate initiatives “to address the number of students who were not graduating.” Similar to Pamlico County Schools’ Success Coordinator role, UCPS created the position of Student Support Counselor, one of whom is placed in each high school in the district. These counselors are assigned to work with both middle and high school students who fall behind academically, exhibit poor behavior, or are subject to personal circumstances that put them at risk of dropping out. In its emphasis both on assisting students with the transition from middle to high school and on developing a relationship between students and an adult who can advocate for them, the program exhibits a number of the best practices discussed in this report.100

UCPS also has used another strategy discussed in the literature, starting the Career Academy of South Providence to provide an alternative school for students who are not earning course credits at an adequate rate to progress towards graduation. Credit recovery initiatives in the Academy allow students to get back on track for graduation, and targeted resources assist them with courses “they may have failed two or three times.”101

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101 Ibid.
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