

## BEST PRACTICES TO PROMOTE HIGH SCHOOL GRADUATION

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*This summary highlights key findings from a more extensive literature review prepared under contract to the WCPSS Evaluation & Research Dept. (Donley, 2008).<sup>1</sup>*

### Abstract

*Significant attention and resources have been focused on reforming high schools to enhance graduation rates. The research literature supports the following practices:*

- *For struggling students, accurate identification and intensive instructional, monitoring, and counseling support*
- *For 9<sup>th</sup> graders, transition activities, personalization, and academic support strategies*
- *For teachers, intensive training to help them provide effective instruction and support, particularly for students showing signs of risk.*

## THE GRADUATION RATE CHALLENGE

A recent national Diplomas Count report cited in *Education Week* (2008) projected that approximately 30% of students in the class of 2008 would fail to graduate with a high school diploma.<sup>2</sup> The most recently reported North Carolina graduation rate (for 2007-08) was 70.2%. Although the Wake County Public School System (WCPSS) graduation rate for 2007-08 was higher than the state rate and national projections, at 78.8% overall, the WCPSS vision is that all students will graduate on time, prepared for the future (Haynie, 2008).

A high school diploma is considered vital today. More than two-thirds of new jobs created during the current decade require a college education, with the best-paying, fastest-growing jobs requiring the most education (Carnevale & Descorchers, 2003, as cited in Quint, 2006).

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<sup>1</sup> The Donley (2008) document was used as the source document for most of the material in this summary, with some direct excerpts. Most references are as summarized in the Donley document, which is available through E&R (contact eandr@wcpss.net).

<sup>2</sup> These graduation rates are for the most recent profile for the class of 2005; graduation rates are calculated using a Cumulative Promotion Index. For further information, see Education Week Diplomas Count 2008 Graduation Briefs Report at <http://www.edweek.org/ew/articles/2008/06/05/40sgb.h27.html>.

## PERSPECTIVES OF DROPOUTS

Students graduate only once from high school; this could be within four, five, or more years. On the other hand, students may drop out one or more times. If they do not return, they will never graduate, so studies of why students dropped out can provide ideas on how to make high schools more supporting, inviting places to encourage staying through graduation.

In a comprehensive national study of high school dropouts, focus group participants were asked why they left school without graduating and what might have helped them stay in school (Bridgeland, DiIulio, and Morrison, 2006). Some students left school primarily because of significant academic challenges (35%), but the majority left in good standing; most (70%) were confident that they could have graduated if they had tried. Other major reasons given for dropping out were that classes were not interesting (47%), students were not inspired to work hard (69%), or students had personal reasons for leaving school, such as getting a job (32%) or becoming a parent (26%). Two-thirds of participants indicated they would have worked harder if more had been expected of them; 80% reported they had one hour or less of homework each day. When asked what might have helped them stay in school, dropouts suggested:

- improved teaching and curricula to make school more relevant and to help them see connections between school and work (81%);
- smaller class sizes (75%), along with more academic support through tutoring, summer school, and extra time with teachers (70%);
- more supervision in school (70%) and safer schools (57%);
- a stronger relationship with someone in the school who could help with problems (only 56% reported having this connection); and
- improved parent/school communication (71%).

Of those who left because of academic challenges, 30% reported they could not keep up with their courses, and 43% missed too many days to catch up.

## EFFECTIVE PRACTICES TO PROMOTE GRADUATION

A variety of programs are designed to reduce dropout rates and increase graduation rates; many also aim to improve college/work readiness skills of high school students. Dropout prevention is considered a way to increase graduation rates, because students cannot graduate if they are not present in school. (Dropout recovery programs are also relevant, but strong studies were not found on this topic.) Jerald (2007) recently reviewed the dropout prevention research nationwide; he recommends that a comprehensive plan for reducing dropouts and raising graduation rates involve the following components:

- predicting potential dropouts accurately,
- intervening to help at-risk students, and
- preventing dropouts by changing factors schools can control.

## Predicting Potential Dropouts

Factors traditionally associated with being “at-risk” (e.g., demographic background, family factors, having adult responsibilities) are inadequate predictors of specific individual students who will drop out. As Jerald (2007) points out, while a specific group of students may be more likely to drop out, that does not automatically mean that a particular student in the group will drop out. Prediction accuracy can increase if schools consider educational warning signs in targeting students for dropout prevention. Most dropouts show signs of disengagement (e.g., high absenteeism) and academic difficulty (e.g., low GPA in 9<sup>th</sup> grade, fewer credits completed) in middle grades and 9<sup>th</sup> grade. Students who become disengaged by not participating in school will be more likely to fail classes and not graduate.

Most ninth graders need special attention as they transition to high school. As students get used to a larger academic setting and higher demands from coursework, even high-achieving 8<sup>th</sup> graders can fall off track to graduation. Ninth grade typically has the highest dropout rate (Gilleland and Dulaney, 2005).

## Interventions to Help Students Most At Risk

Dynarski and Gleason (1998) reviewed federal interventions designed to reduce dropout rates and concluded that:

- High-intensity programs offering services such as smaller classes, accelerated instruction that helps overage students catch up with their peers, and intensive counseling services can be effective at reducing dropouts; and that
- Low-intensity programs that provide only occasional counseling, tutoring, self-esteem, or leadership training are typically ineffective.

The U.S. Department of Education’s What Works Clearinghouse conducts rigorous reviews of educational research and highlighted two programs that targeted individual at-risk students as having significant impacts on reducing dropout rates (U.S. Department of Education, 2007): Check and Connect (Sinclair, Christenson, Evelo, and Hurley, 1998; Sinclair, Christenson, and Thurlow, 2005) and ALAS: Achievement for Latinos through Academic Success (Larson and Rumberger, 1995, as cited in National Center on Secondary Education and Transition, 2004).

### *Check and Connect*

This dropout prevention strategy was originally developed for middle grade students identified with learning, behavioral, or emotional disabilities and was expanded to high school youth<sup>3</sup>. A “monitor” was assigned to students in junior high school and provided ongoing frequent assessment of student engagement, using individualized intervention strategies to help the student develop successful learning and engagement habits. The idea of a monitor was based on

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<sup>3</sup> The model is also currently being adapted for use at the elementary level and tested for students without disabilities. For more information on this program see <http://ici.umn.edu/checkandconnect/default.html>.

resiliency research that showed the importance of a caring, concerned adult. All students received basic interventions, including at least a monthly conversation with their monitor about academic progress, conflict resolution, and problem solving. Students exhibiting early warning indicators of withdrawal received more intensive interventions (e.g., connections to other service agencies or negotiating alternatives to out-of-school suspensions).

Sinclair et al. (1998) showed that Check and Connect junior high participants were significantly less likely than similar control group students to drop out and were more likely to be on track to graduate on time by the end of their freshman year of high school. A separate study by Sinclair et al., (2005) found Check and Connect students were significantly less likely than control students to drop out of school by the end of the fourth and fifth follow-up years. However, rates of on-time graduation—approximately 30% for both groups—were similar for the two groups.

Check and Connect costs about \$1,600 per student per year, which Jerald (2007) indicated was higher than less intensive initiatives. However, more intensive interventions have been found to be more effective thus far (Dynarski and Gleason, 1998).

### ***ALAS: Achievement for Latinos through Academic Success***

The ALAS<sup>4</sup> initiative was developed in 1990 to improve educational outcomes for high-risk Hispanic/Latino middle school students by addressing student, school, family and community factors that may affect dropping out. The program focused particularly on students in 6<sup>th</sup>-8<sup>th</sup> grades with learning, emotional, or behavioral disabilities but also included non-disabled students who exhibited high-risk characteristics. Counselors provided counseling and problem-solving training, close monitoring of attendance and performance, communication with parents, parent training in school participation, and accessing and using community resources (in collaboration with community agencies).

Research demonstrated that ALAS students were more likely than were control group students to be enrolled in school at the end of the intervention in 9<sup>th</sup> grade. However, statistically significant differences between the groups declined two years after the intervention (Larson and Rumberger, 1995, as cited in National Center on Secondary Education and Transition, 2004). A larger proportion of ALAS students than comparison group students had earned enough credits to graduate on time at the end of the 9<sup>th</sup> and 10<sup>th</sup> grades; however, no significant differences were observed in graduation rates at the end of 12<sup>th</sup> grade (Gandara, Larson, Mehan, and Rumberger, 1998, as cited in U.S. Department of Education's What Works Clearinghouse, 2007). The researchers stressed that while the intervention showed promising results, efforts must be sustained through the high school years.

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<sup>4</sup> The program has not been implemented beyond the original demonstration project.

### Prevention: Changing Factors under Schools' Control

Darling-Hammond and Friedlander (2008) conducted research to isolate school components that were particularly effective for low-income students from minority groups. Based on five high schools in California that were successful with at-risk groups in terms of graduation and college-going rates, the researchers found a number of common design features:

- **Personalization:** small learning environments (e.g., class sizes of 25 students), smaller teacher loads with use of block scheduling, and advisory systems that organize counseling, academic support, and family connections;
- **Rigorous and relevant instruction:** high expectations for all students, teaching intellectual and research skills in the context of rigorous coursework, applying learning to real-world problems; and
- **Professional learning and collaboration:** substantial time during the week to plan, 7-15 days throughout the year for professional development, mentoring and coaching systems for new and experienced teachers, and shared governance.

In essence, these practices helped build relationships between students and teachers and afforded support and training for teachers to provide rigorous and relevant instruction. In turn, it appears this led to graduates who were equipped to become critical thinkers and leaders. The researchers point out that significant policy changes may be needed before these types of schools become the norm rather than the exception.

**Career Academies:** Career Academies are cited by the What Works Clearinghouse as showing strong research evidence of a positive effect on factors impacting dropout and graduation rates.<sup>5</sup> First established in 1969, Career Academies are available in more than 2,500 high schools in the U.S. The key program features of Career Academies are:

- a school-within-a-school structure that provides smaller and more personalized and supportive learning environments; students share several classes per day and have the same teachers over multiple years;
- integrated academic and vocational curriculum so students see the relevance of their academic coursework to their lives and are prepared for both college and work; and
- partnerships with employers to provide internships and career awareness activities.

Kemple and Snipes (2000) conducted a 10-year study of 1,700 students (85% of whom were either Hispanic/Latino or Black/African American) in nine Career Academies across the country. Results showed that these programs were most successful at improving outcomes for those

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<sup>5</sup> Due to high numbers of applications to the Career Academy schools studied, researchers were able to employ random assignment procedures, thus yielding a comparison group of similar students not enrolled in Career Academies for which to compare outcomes.

students most at risk of dropping out. This subgroup within the Career Academies had significantly reduced dropout rates, improved attendance, increased academic course-taking; and increased likelihood of earning enough credits to graduate on time.

The degree and type of implementation of the program influenced effectiveness. In sites where academies produced striking improvements in the interpersonal support that students received from teachers and peers, both high-risk and medium-risk subgroups had positive outcomes. However, no significant group differences were found in standardized mathematics and reading achievement test scores. Qualitative data suggest this may be because Career Academies used similar instructional strategies, academic curricula, and professional development opportunities as the Career Academies.

Follow-up studies found that:

- Both program and comparison group students were more likely to graduate from high school and enroll in college than similar students nationally, with more than 90% graduating from high school or receiving a GED and approximately half earning some type of postsecondary credential (Kemple, 2004; Kemple, 2008).
- Young men (but not young women) who attended Career Academies, relative to young men in the non-academy group, increased their earnings by 17% per year, or nearly 30% over the eight years studied.

Although Career Academies produced the most successful outcomes for high-risk students, the researchers recommended programs involve heterogeneous populations to ensure that high-risk students are exposed to other students who are highly engaged in school and to avoid tracking.

***Linking Academic Content with Career Technical Education:*** Hoachlander and others (e.g., Southern Regional Education Board, 2008) advocate integrating college-preparatory academic content and skills within career technical education to facilitate learning, motivate and challenge students, and help them see the direct connection between what they learn and their postsecondary lives. Hoachlander (2008) cites recent evidence from Plank, DeLuca, and Estacion (2005) showing that dropout rates were four times higher when students took no Career Technical Education (CTE) courses than when they completed a balance of CTE and academic courses. Integrating academics with CTE courses may also produce improved student achievement gains (Stone, Alfeld, Pearson, Lewis, and Jensen, 2007, as cited in Hoachlander, 2008). Hoachlander also advocates the use of programs of academic and technical study that integrate rigorous college-preparatory material with real-world learning around industry fields. California studies suggest potential positive effects, with higher rates of passing the high school exit exam, and completion of challenging academic courses (Bradby, Malloy, Hanna, and Dayton, 2007, as cited in Hoachlander, 2008). Jerald (2006) advocates a nationwide effort to develop model curricula that infuse workplace applications with rigorous academic content.

***Additional studies:*** Studies with less rigorous designs suggest that supportive environments, rigorous instruction, and relevant instruction can lead to stronger outcomes for students.

- Providing student and parent visits and tours, parent orientation, and meetings for middle and high school teachers on curriculum coordination may be sufficient for highly motivated and academically successful students as they enter high school (Turner, 2004).
- Providing comprehensive advisory programs for 9<sup>th</sup>-grade students can improve grades, increase the number of students taking college entrance exams, and decrease dropout rates (Osofsky, Sinner and Wolk, 2003 as cited in National Association of Secondary School Principals, 2004).
- Combining effective advisory programs with 9<sup>th</sup>-grade courses taught by superior teachers, creative double-block scheduling (e.g., pairing an accelerated reading class with English for freshmen reading below grade level), and interdisciplinary teaching can be helpful (Donegan, 2008).
- Accelerating instruction for students who enter high school with inadequate skills instruction can help them catch up more quickly than remedial classes, allowing students to earn more credits and to achieve higher promotion rates than students in comparison schools (Jerald, 2006; Kemple, Herlihy, and Smith, 2005).
- Providing smaller secondary schools or communities can promote relationships and relevance, but their impact on graduation rates is inconclusive at this point (Jerald, 2006).
- Combining smaller learning communities with other approaches yielded greater success.
  - ▶ Combining a school-within-a-school approach with reforms such as extra academic support or interdisciplinary team teaching in grade 9 lowered dropout rates by up to two-thirds in a group of Maryland students (Kerr and Legters, 2004, as cited in Jerald, 2006).
  - ▶ Using small learning communities, interdisciplinary teams, double-block scheduling, and career/technical/college-preparatory curricula improved attendance, course credits earned, and promotion rates for first-time 9<sup>th</sup> graders in the Talent Development model (participants were significantly below grade level in reading and mathematics). However, more than one-third of freshmen still fell off track and were not promoted to 10<sup>th</sup> grade, and more than half will not be ready to graduate within four years (Kemple, Herlihy, and Smith, 2005).
  - ▶ Combining Smaller Learning Community approaches with stronger safety nets (e.g., advisories, enhanced guidance systems, etc.) and intellectually transformative learning experiences for students (Ancess, 2008) are more likely to have long-term impact.

### *Effective Teaching Practices*

The Center for Research on Education, Diversity, and Excellence (CREDE) cited the following strategies<sup>6</sup> as most effective teaching practices for students at-risk of educational failure based on a literature review:

- Having teachers and students work together to develop ideas for productive activities,
- Applying literacy strategies and developing language competence in all subject areas,
- Connecting lessons to students' lives (home, community, and school experiences),
- Challenging students with lessons providing cognitive complexity, and
- Emphasizing teacher-student dialogue over lectures as an instructional technique.

Research has pinpointed effective instructional practices that work for all grade levels and subject areas (e.g., Marzano, Pickering, and Pollock, 2001) and those that appear to be most effective within particular disciplines or for particular types of students (e.g., Educational Research Service, 2006). Additional research has isolated the characteristics and practices of effective teachers (e.g., Hattie, 2003 as cited in Educational Research Service, 2006; Haynie and Stephani, 2008).

## **WAKE COUNTY PUBLIC SCHOOLS INITIATIVES AND RESULTS**

Research conducted in WCPSS can be particularly helpful to staff in supporting all students (prevention) and those most at risk of not graduating (intervention).

### **Effective Teaching Practices**

Haynie (2008) found effective teaching practices that were similar across major high school courses in promoting optimal achievement for students of all ability levels. Teachers who helped students show the highest achievement growth, compared to teachers who obtained the lowest growth, commonly:

- held high academic expectations for all students (stressing acquisition of facts within a sense-making context and concepts),
- centered instruction around student needs rather than teacher needs,
- aligned well-planned lessons tightly with the state curriculum,
- planned collaboratively with other teachers.

The ways in which top teachers in various subjects were student-centered varied by subject.

- Top biology teachers placed meetings with students before or after school above the importance of other meetings.
- Top algebra teachers addressed challenges more positively than bottom teachers, searching for systemic solutions.

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<sup>6</sup> See: <http://www-gse.berkeley.edu/research/crede/standards/standards.html> for further information on these strategies.



- Top U.S. History teachers connected content with current events and students' lives.

### **Block Scheduling**

Most WCPSS high schools now use a block schedule of four courses each semester rather than a traditional student schedule in which students take six full-year courses (Reichstetter and Baenen, 2005). This change was instituted primarily because of increased graduation requirements (which are easier to achieve with block scheduling, wherein students accrue more credits), but also to allow increased opportunities for rigor, relevance, and relationships as suggested in high school reform research. Preliminary evaluation results showed increased academic course opportunities, higher enrollments in advanced courses, and higher numbers of credits earned (Reichstetter and Baenen, 2005).

WCPSS high schools have recently instituted a variety of research-based targeted strategies to enhance student learning/achievement and potentially result in higher rates of graduation for *all* students. However, readers are cautioned that the effectiveness of these practices has not yet been formally studied. In addition, readers are reminded that the national research suggests combinations of approaches will likely be needed.

- Some schools are experimenting with block scheduling to help maximize benefits for struggling students by pairing selected courses to run yearlong for 45 minutes or cover one subject for 90 minutes for two semesters. For example, at Leesville High School in 2006-07, 9<sup>th</sup>-grade teachers recommended students who might be more successful in geometry and biology in 10<sup>th</sup> grade with extra support. They designed a one-credit "biology-geometry combination course," to be taken along with regular biology and geometry courses, which was co-taught by biology and geometry teachers.
- Panther Creek High School has implemented SMART (Students Maximizing Achievement, Relationships, and Time) Lunch, which is designed to support all students academically, with extra support for struggling students. The entire school has a 55-minute, common lunchtime divided into 30 minutes for lunch and 25 minutes for teachers to work with students in tutorials or with other school staff in their Professional Learning Communities (PLC) teams. All students are required to attend at least 2.5 hours of SMART Lunch for each class each semester, with students who are failing a course at the end of the first nine weeks contracting for more time in SMART Lunch sessions. If the contract is fulfilled, a passing grade correction can be submitted each nine weeks. Beyond academic sessions, students may choose to participate in various intramurals during SMART Lunch, and club meetings, pep rallies, college advisors, and guest speakers are also accommodated.
- Fuquay Varina High School has begun an advisory program for all 9<sup>th</sup> graders; the advisor meets regularly with students and remains with them all four years. This addresses building relationships as well as showing students connections of school to their futures. For struggling students, the school also pairs weak subject area courses with seminar courses for 9<sup>th</sup> graders, and has begun an academic recovery program for those repeating 9<sup>th</sup> grade.

## CONCLUSIONS

Students who fail to graduate have a variety of characteristics and a variety of reasons. We cannot assume all students who may not graduate have low levels of ability. Dropouts suggest that smaller classes might have made a difference for them, while some studies suggest smaller schools might be helpful if used in conjunction with other strategies. Both of these really have to do with building relationships and connections to school, which can be accomplished in a variety of ways.

Improving graduation rates will not be easy, but research suggests that graduation rates can be improved with a combination of approaches sustained over time. Improvements in several areas can help improve graduation rates:

- more accurately identifying where to target services
- supporting all 9<sup>th</sup> graders as they make the transition to high school,
- providing high-intensity interventions for at-risk students,
- providing intensive professional development for teachers on instructional strategies that will engage students more fully and improve learning,
- finding ways to personalize the high school environment and build caring relationships (through smaller learning communities or in other ways),
- contextualizing the instruction within students' lives to show them the relevance of their learning, and
- integrating academic curricula with career-related themes to ensure that students graduate with the 21<sup>st</sup>-century skills and applied competencies necessary for postsecondary lives.

As WCPSS works to achieve the board of education goal of all students graduating on time, school staff, in a variety of roles, will need to collaborate to identify research-based strategies that hold promise within their school setting. Teachers can play an important role in supporting academic performance in the regular classroom; administrators may provide or arrange for training on instructional practices; counselors and social workers can help identify students at risk, provide academic guidance, and provide support beyond the academics; and staff, parents, community members, and students can help in tutoring and other support roles. Practices that are comprehensive, mutually acceptable, and sustained are more likely to make a positive difference.

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