

Prepared for Graduation: A Multi-Faceted and Multi-Tiered Intervention to Support At-Risk High School Students

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Abstract

National Assessment of Educational Progress data have indicated that many secondary students lack sufficient literacy skills, and that students who receive free/reduced lunch, students from rural settings, and students with disabilities are particularly low-performing (National Center for Education Statistics, 2015). Moreover, sometimes these students lack connectedness, which has been linked to risk-taking behaviors and school dropout (Gordon, Downey & Bangert, 2013; Balfanz, Herzog & Mac Iver, 2007). For at-risk students, including students with disabilities, preparation for post secondary life is especially important. Engaging students in workforce preparation is arguably as essential as academic preparation. Therefore, at-risk secondary students require comprehensive interventions to keep them in school, attend to literacy needs, connect them with caring people, and provide value-added opportunities to promote future well-being. This paper details the development and evaluation of Prepared for Graduation, a multi-faceted and multi-tiered intervention to address the needs of at-risk adolescents in a rural setting.

Keywords: At-risk students, high school, literacy, dropout, mentoring, workforce development

1.0 Introduction

Recent NAEP data suggest that many secondary school students perform poorly on literacy tasks (National Center for Education Statistics, 2015). Furthermore, the literacy proficiency scores of students who receive free/reduced lunch are lower than those of students who are not eligible for free or reduced lunch. Additionally, students in rural settings score lower than those in suburban settings. For some struggling students, in fact, school performance actually appears to plateau in middle school, while the demands of school continue to increase or even escalate throughout high school, resulting in a growing performance gap (Hock, Brasseur, Deshler, Catts, Marquis, Mark, & Stribling, 2009). Given data such as these, it is little wonder that students with low performance are at significant risk for dropping out of school (e.g., Hammond, Smink, & Drew, 2007). In the face of such a challenge, secondary school students require access to comprehensive, research-based interventions to meet the differentiated needs of students, particularly those who struggle with the literacy demands of schools, including students with mild/high incidence disabilities.

Students with learning disabilities and other students with high incidence disabilities (e.g., behavior disorders, speech/language disorders) are increasingly being served in general education classrooms for 80% or more of the entire school day (U.S. Department of Education, 1990, 1996, 2002, 2010, 2014). The presence of these students typically adds substantial variance to the overall composition of classes and thus increases the demands on teachers regarding planning and instruction (e.g., Schumaker & Deshler, 2010) due to their persistent underlying deficits with regard to identifying words, fluency, vocabulary, and comprehension (Hock, et al., 2009) in addition to writing expository text (Gregg & Mather, 2002; Saenz & Fuchs, 2002).

Moreover, results from the National Longitudinal Transition Survey-2 (Wagner, Newman, Cameto & Levine, 2006), indicated that students with LD are also likely to earn fewer high school credits than non-disabled peers, and fail at least one course as a ninth grader.

1.1 Academic interventions

To address the academic needs of low-performing students, educators must provide specialized services and use research-proven techniques. A significant research base already exists to inform such services and practices. John Hattie's (2009) seminal study of over 800 meta-analyses, *Visible Learning*, concluded that direct instruction and meta-cognitive strategy instruction, as well as key instructional elements of both forms of instruction (i.e., feedback), have moderate and high effect sizes for students with and without disabilities. An earlier meta-analysis conducted by Swanson & Hoskyn (1998) compared the effects of four intervention models: direct instruction alone, strategy instruction alone, direct instruction in combination with strategy instruction, and instruction that included neither direct instruction nor strategy instruction. Analyses showed significant differences in effect size favoring the combined model over the other models.

In short, empirical evidence has underscored the value of direct instruction and strategies instruction for explicit, intensive, and specialized instruction to meet the needs of low performing students, including students with learning disabilities. Explicit instruction plays a critical role in helping all students develop the literacy skills and strategies they need to comprehend text or write at the level required in high school and beyond (Bulgren, Deshler, & Lenz, 2007; Deshler, Palincsar, Biancarosa, & Nair, 2007; Dimino, 2007; Lenz, Ehren, & Deshler, 2007).

1.2 Mentoring

Improving student literacy skills and performance on academic tasks is essential; however, sometimes students who struggle in school also lack a sense of connectedness. The Center for Disease Control and Prevention (2009) defined connectedness as "the belief by students that adults and peers in the school care about their learning as well as about them as individuals" (p. 3). The concept has been defined elsewhere with slight variations, including "the extent to which students feel personally accepted, respected, included and supported by others in the school social environment" (Goode now 1993, p. 80, as quoted by Chapman, Buckley, Sheehan, and Shochet, 2013). Connectedness has been associated with the Eriksonian theory of human development (Erikson, 1994) as well as theories of attachment (e.g., Cassidy & Shaver, 2010). One's sense of connectedness appears to be related to other factors, is a modifiable construct, and has been measured in different ways.

Researchers have investigated student connectedness and identified a set of predictor variables related to student dropout. That is, when a student's lack of connectedness is defined by poor attendance, discipline/behavior referrals, and course failures, they are more likely to drop out of school (Gordon, Downey & Bangert, 2013; Balfanz, Herzog & Mac Iver, 2007). A review by Chapman, Buckley, Sheehan, and Shochet (2013) concluded that higher levels of school connectedness were strongly related to students' delayed initiation of cigarette smoking, alcohol and marijuana use, delinquency, and violent behavior. The reviewers found that a poor sense of connectedness, on the other hand, was also linked to carrying weapons, damaging property, and gang membership, in addition to transport-related risk behaviors such as riding with dangerous and drunk drivers or underage driving.

In response to a perceived lack of student connectedness, schools, school districts, state departments of education, and private agencies have initiated various programs or interventions, one of which is mentoring. Mentoring is a central recommendation of the National Dropout Prevention Center (Hammond, Smink, & Drew, 2007) and the IES Dropout Prevention Guide (Dynarski, Clarke, Cobb, Finn, Rumberger, & Smink, 2008) to address the needs of at-risk students. Mentoring models may include peer mentors, teachers as mentors, or others outside the school and in the community as mentors. Mentor programs have also been implemented in numerous ways (before school, after school, during school), and included different foci (instructional/remedial, relational/emotional).

There appears to be a growing base of empirical studies in support of mentoring for struggling students. For example, Lapan, Wells, Petersen & McCann, (2014) found that regularly scheduled mentoring by a school counselor enhanced student connectedness as measured by student questionnaire responses. Gordon, Downey, and Bangert (2013) compared the effects of mentoring from community members and local university students on sixth through tenth graders to comparison students without mentoring, and found fewer unexcused absences, fewer discipline referrals, and higher connectedness scores on four questionnaires.

Communities in Schools, a nationally-based organization, have produced positive results from independently-evaluated mentoring practices for many years (ICF International, 2010). In sum, enhancing students' sense of connectedness through mentoring appears to have theoretical and empirical promise for addressing the related non-academic needs of struggling adolescents. Schools also may need to deploy value-added educational efforts that equip such students with marketable skills and dispositions in order to be college or workforce ready.

1.3 Workforce readiness

Some colleges and universities have reported that more students appear to be poorly prepared for college-level academics and, therefore, need to offer a greater number of classes to equip students with reading, writing, and math competencies (National Center for Public Policy and Higher Education, 2010). At the same time, U.S. companies have reported that as much as half of the students who enter the workforce after high school are unprepared for even entry-level positions (e.g., Deil-Amen & DeLuca, 2010; The Conference Board, 2006).

The School to Work Opportunities Act of 1994 (CFDA No. 84.278) was a federal response to students' perceived lack of preparation for work and careers, make education more relevant to students, and enable students to acquire marketable skills. States and industry partnerships have also sought to find ways to increase the attendance of disconnected students, keep them in school, and prepare them for post-secondary life. Such goals may be especially important for students with disabilities who have higher dropout rates and lower employment rates. In fact, for individuals with disabilities and less than a high school diploma, only 7.9% are employed in the work force, just 14.3% of those who are high school graduates are employed, 21.3% are employed with some postsecondary education, and only 26.1% of individuals with disabilities with at least four years of college are employed (U. S. Department of Labor, 2014).

For students who struggle to achieve and stay in high school, including students with disabilities, preparation for post secondary life is especially important. Intentionally engaging students in workforce preparation activities is arguably as important as academic preparation. Programs such as AVID (Advancement via Individual Determination) have provided avenues to better prepare lower-performing and/or underserved students for college. Other school-based or non-profit partnership-based efforts have shown promise for explicitly assisting low performing students with preparing resumes and teaching soft skills, as well as supporting job site training and apprenticeships (e.g., Balfanz, Bridgel and, Bruce & Fox, 2012).

Therefore, based on this review, it appears that a multi-faceted and multi-tiered school-based approach to meeting the needs of low-performing students, including those with high incidence disabilities, must include learning opportunities that are explicit, individualized, and future-focused. Following is the description and data-based evaluation of such an effort, called Prepared for Graduation, including discussion and lessons learned.

2.0 Evaluation Methods

2.1 Setting

This programmatic effort and evaluation took place in a small, rural district in the Southeastern US that served approximately 3800 students. Given the departure or closing of many industries in recent years, questions existed regarding future employment for students who did (and certainly, for those that did not) have a high school diploma. Approximately 45% of students qualified for free or reduced lunch, and approximately 17% of the student population was classified as students with disabilities. In recent years, middle and high school students in minority and disability subgroups had never met AYP in achievement. Specifically, 85% of the students with disabilities scored Below Basic or Basic on state mandated tests at all schools, the graduation rate for students with disabilities was a mere 40%, only 56% passed the state achievement test on their initial attempt, and only 38% had a passing rate on End of Course (EOC) tests.

Efforts to improve the achievement of students had been made by decreasing the number of students with disabilities being removed from general education classrooms by using inclusion models, and attempting other school wide efforts such as Positive Behavior Interventions and Supports (PBIS), but strategies used by the general education teachers had largely proven ineffective for low performing learners as evidenced by district data. Additional internal evaluation revealed that many teachers were inadequately prepared to teach at the levels demanded by state tests, unprepared to teach low performing students, and spent large amounts time planning lessons with little differentiated instruction.

Furthermore, like many other districts, this one discovered that given the literacy demands of secondary schools, current dropout rates among adolescents, and the challenges faced by content area teachers and administrators to meet the criteria set by federal and state legislation, there were few research-based options at the secondary level. Therefore, the district leadership began to search for multi-faceted interventions for secondary schools that would not be just another "pull out" program, but one that would be an integral part of the school wide focus on literacy, connectedness, and promoting college and career readiness.

The larger district goal was to improve the outcomes of at-risk students with and without disabilities. More specifically, the district goals were to a) increase annual proficiency rates of a targeted at-risk population on state assessments, b) increase the mean grade point average (GPA) of target students, c) increase the percentage of target students reading on grade level, d) increase the percentage of the target population that remained in school, e) improve the sense of connectedness of target population toward school and learning, f) reduce the absenteeism for the target group, and g) decrease the number of discipline referrals for target students.

2.2 Target students

Prepared for Graduation was implemented as a multi-faceted, multi-tiered intervention for targeted high school students who were at-risk for dropping out. In the first year of implementation, there were 58 students targeted for intervention. This group was selected based on an analysis of data with regard to attendance, disciplinary referrals, course grades and credits earned, state test performance, and recommendations by school counselors who were familiar with other factors such as school connectedness, history of abuse in the home, socioeconomic status of the family, homelessness or lack of a parent in the home, and if the student was a teen parent. By design, most target students were ninth graders (76%; n=44), however, 24% (n=14) were tenth graders who had earned a limited number of passing course credit hours. 45% (n=26) were female and 55% (n=32) were male. Fifteen students (26%) were African American, one student (2%) was Hispanic, and forty-two students (72%) were White/Caucasian. Six students (10%) had learning disabilities. The target population did not disproportionately represent any one group in the school.

In year 2, there were 61 target students. Again by design, the vast majority were freshmen (84%; n=51) and the remainder (16%; n=10) included tenth, eleventh, and twelfth graders who had earned a limited number of passing course credit hours. 34% (n=21) were female and 66% (n=40) were male. Sixteen students (26%) were African American, one student (2%) was Hispanic, forty-two students (69%) were White/Caucasian, and two students (3%) did not declare ethnicity. Ten students (16%) had learning disabilities.

2.3 Procedures

Consistent with recommendations from the National Dropout Prevention Center (Hammond, Smink & Drew, 2008) and the IES Dropout Prevention Guide released by the National Center for Education Evaluation and Regional Assistance (Dynarski, et al., 2008), three major interventions or sources of support were employed in *Prepared for Graduation*: Academic Support, Mentoring Support, and Workforce Readiness Support. With the financial backing of the district and a grant from the state Department of Education, school and district leadership invested in the Content Literacy Continuum (CLC) to address the need for student Academic Support. The Content Literacy Continuum (CLC) is a multi-tiered or response to intervention (RTI) structure to increase students' literacy performance within and across secondary disciplines. The CLC is referred to as a "continuum" because a range of interventions is provided to meet the needs of all students; the intensity of intervention increases to address greater degree and specificity of student needs (Ehren, Deshler & Graner, 2010). Moreover, the Content Literacy Continuum is specifically designed to help secondary schools sustain comprehensive and integrated literacy interventions using instruction that has proven to be effective (e.g., Schumaker & Deshler, 2010). That is, the CLC has evolved from over 35 years of research and development by researchers and associates of the University of Kansas Center for Research on Learning.

Over the first three to four months of the first school year implementing *Prepared for Graduation*, approximately a dozen content area teachers volunteered to learn and implement CLC Level 1 (i.e., Tier 1) classroom interventions. Level 1 interventions were focused on the mastery of critical content for all students within each academic discipline or content area (e.g., history, English, math, science), regardless of student literacy levels. *Content Enhancement Routines* were used by teachers, including the Unit Organizer Routine (Boudah, Lenz, Bulgren, Schumaker, & Deshler, 2000) and the Framing Routine (Ellis, 1998).

During the second year, more than a dozen additional content area high school teachers volunteered to receive professional development, classroom coaching, and materials to implement CLC Level 1 Content Enhancement interventions as well as Level 2 vocabulary interventions. Structured time was included in the professional development activities to align CLC interventions to state curriculum requirements. With additional grant support, the district acquired software for teachers to improve planning, sharing, and presentation of interventions on technology boards.

Two teachers with background in reading instruction volunteered to learn and implement more intensive reading strategy instruction as a CLC Level 3 intervention to identified students in a specially-scheduled *Xtreme Reading* course (Strategic Learning Center, 2010) during regularly scheduled school hours on the school campus. This course was created for target students who were several years behind their peers in reading performance, including some students with disabilities, and at risk for continued failure and dropout. During the first year, 13 of the 58 target students met these criteria and were included in the course. In the second year, 11 of the 61 target students were in the Xtreme Reading class.

Xtreme Reading (XR) is a spiral curriculum comprised of eight foundational reading and motivation strategies delivered in a single school year. XR entails explicit instruction in each strategy, guided practice, meaningful feedback, and independent practice in generalizing and combining strategies within and outside school. Fidelity to implementation of CLC Levels 1, 2, and 3 was insured by rigorous professional development, in-class instructional coaching by professional developers, and validated by regularly scheduled principal walk through using protocols aligned with instructional components of CLC.

Mentoring Support was provided by a network of volunteers who desired to serve the community and impact the lives of young people. Like academic support, mentoring is a key recommendation of the National Dropout Prevention Center (Hammond, Smink & Drew, 2008) and the IES Dropout Prevention Guide (Dynarski, et al., 2008). Mentors learned about evidence-validated mentoring practices based on the work of Communities in Schools (ICF International, 2010), and became familiar with important challenges, confidentiality issues, and resources for mentoring. All potential mentors were asked to participate in a background check. Mentors then were matched with each target student and met with students one-on-one during regularly scheduled times each week during school hours on the school campus. This occurred in year one and two, with some mentors committing to the same students across both school years. Meetings were coordinated and scheduled by the Mentoring & Workforce Readiness Coordinator. In order to address student needs for role models and guidance, mentors were encouraged to engage students in conversations around the specific challenges or needs of each student (e.g., attendance, behavior, relationships), as well as help to establish and monitor goals for addressing challenges. Mentor meetings were not used for academic tutoring.

Workforce Readiness Support was the third major intervention in Prepared for Graduation, and addressed the need of targeted at-risk students to be better prepared for life beyond high school. Specifically, the high school partnered with the local Business Alliance and Chamber of Commerce to identify potential businesses in the community where target students could explore various careers and participate in job site visits that matched their interests and aptitudes. Students learned from community members who worked in different fields, in addition to how to prepare resumes, complete job applications, and participate in simulated interviews. All target students participated in one or more job site visits each year. Target students also learned about college or other post-secondary education options, and many made college campus visits. In the second year of Prepared for Graduation, an elective course was initiated for target students to access the ACT Work Keys Career Curriculum (act.org/solutions/career-success/training-curriculum/) via computer and attain a career readiness certificate.

2.4 Data collection

Descriptive data were collected on a number of dependent variables, including absenteeism, discipline problems/referrals, passage rates on state End of Course assessments, grade point average, reading performance, completion of Individual Graduation Plans (IGPs), percentage remaining in school, sense of connectedness, and additional mentoring and Workforce Readiness participation indicators.

Most evaluation data were accessible through classroom, school, and district data management systems, and quantifiable. For example, office referral and attendance data were collected each day at each school. State assessment performance data, grade point averages, completion of IGPs, and number of students remaining in school were accessible through the district data management system.

In the Xtreme Reading classes, a group-administered standardized reading test (Test of Silent Contextual Reading Fluency) was administered as a pre and posttest each year to measure reading performance growth in students. The students' sense of connectedness was assessed via a researcher-developed written questionnaire that was completed anonymously by students at the beginning and end of both school years. The questionnaire contained demographic items, items related to perceptions of behavior, and items specific to connectedness. Demographic items asked for grade, age, declared ethnicity, parent(s) in the home, language spoken in the home. Multiple choice items related to perceptions of behavior addressed grades, unexcused absences, overall feelings about self, and drug/alcohol use.

Connectedness was measured by 5-point likert scale questionnaire items (strongly agree, agree, agree some/disagree some, disagree, strongly disagree) that addressed comfort levels in talking to adults at school, talking to peers, availability of help at home or outside of school, belief that an adult knows their name, belief that an adult understands their struggles or encourages them to take school seriously, and a rating of the degree of which they have given up on school. Mentoring and Workforce Readiness participation data were collected from logs kept by the Mentoring & Workforce Readiness Coordinator. These data included the number of mentors involved, the number of times mentors met with students, and the number of students who participated in job site visits.

2.5 Data analysis

Prior to descriptive analysis in year one and year two, the names of students were replaced by coded numbers to ensure anonymity of results. Absenteeism, discipline problems/referrals, and grade point average data were downloaded from the district database and entered in Excel worksheets. Means were calculated across all target students by each quarter of the academic year. Means for subgroups (males, females, students in the Xtreme Reading class, students whose first quarter GPA was less than 2.0 on a 4.0 scale, and students with disabilities) were also calculated and bar graphs were created. Given the launch of the workforce development elective class for target students in the second year of the project, those students were included as a subgroup in the data analysis where available. Passage rates on state End of Course (EOC) assessments were calculated at the end of the school year by tallying the number of target students that passed assessments and dividing that by the number that completed the tests. Individual Graduation Plan (IGP) completion rate was calculated by tallying the number of target students that completed IGPs and dividing that by the number of target students. The percentage remaining in school was calculated by tallying the number of target students at the beginning of each school year and dividing that by the total number of target students on the school roll at the end of each year. The results of the Test of Silent Contextual Reading Fluency (TOSCRF) analyses represent the comparison of student performance at two points in the school year, before and after participation in Xtreme Reading classes.

That is, students in the XR classes were compared to themselves to calculate growth in terms of the difference between pre and post performance. The performance of students participating in XR classes was *not* compared to the performance of another group of students who did not participate in XR classes. A student's data were included in the analysis only when both the pretest and the posttest scores were available for the TOSCRF, i.e., some scores were missing. Therefore, the total number of students whose data were included in the year one analysis was 37 and the total number in year two was 43. Raw scores were calculated by scoring individual student pre and posttest protocols according to test guidelines. Raw scores were converted to grade equivalents. Student scores were entered into an Excel worksheet and means grade equivalents were calculated for the entire group as well as subgroups. Bar graphs were then created. The student sense of connectedness questionnaire contained demographic items, items related to perceptions of behavior, and items specific to connectedness. Responses for each item were tallied and percentages of item responses were calculated. Additional mentoring and Workforce Readiness participation data were tallied as frequencies.

3.0 Results

The results reported here pertain only to target students at the rural high school, specifically, descriptive results regarding absenteeism, discipline problems/referrals, passage rates on End of Course state assessments, grade point average, reading performance, sense of connectedness, completion of Individual Graduation Plans (IGPs), percentage remaining in school, and additional mentoring and Workforce Readiness participation indicators. Results are reported by year, for each of the two years of evaluation.

3.1 Year 1

3.1.1 Absenteeism

On average, the entire group of target students was absent a little more than once per student in the first quarter of the school year (1.15), closer to twice per student in the second quarter (1.64), more often in the third quarter (4.26), and then less than once in the fourth quarter (0.19). The means were a little different but the trend was similar across all of the subgroups. That is, for males, females, students in the Xtreme Reading class, students whose GPA was less than 2.0 in the first quarter, and students with disabilities, absenteeism was small in the first quarter, rose slightly in the second quarter, more than doubled in the third quarter, and dropped in the fourth quarter to a rate less than in the first quarter. In the case of students whose GPA was less than 2.0 in the first quarter, absenteeism was nonexistent in the fourth quarter (0.0).

3.1.2 Discipline problems/referrals

Each target student received, on average, about one office referral for disciplinary infractions in the first quarter of the school year (.94). The mean rate dropped to .42 in the second quarter, rose slightly to .87 in the third quarter, and then dropped again to .26 in the fourth quarter. Like absenteeism rates, the means were a little different, but the trend was similar for all but one of the subgroups. For students whose GPA was less than 2.0 in the first quarter, their mean discipline referral rate by quarter were .38, .13, .13, .13.

3.1.3 Passage rates on state end of course assessments

There were three End of Course tests (EOCs) given in year one of this project, and not all target students completed each of the tests. 69% of target students that completed the *math* EOC passed. Among subgroups, passing rates were as follows: males (75%), females (74%), Xtreme Reading students (69%), students whose GPA was less than 2.0 in the first quarter (100%), and students with disabilities (0%). Only 34% of target students that completed the *English* EOC passed. Among subgroups, passing rates were as follows: males (33%), females (36%), Xtreme Reading students (17%), students whose GPA was less than 2.0 in the first quarter (29%), and students with disabilities (0%). 78% of target students that completed the *biology* EOC passed. Among subgroups, passing rates were as follows: males (82%), females (79%), Xtreme Reading students (72%), students whose GPA was less than 2.0 in the first quarter (86%), and students with disabilities (60%).

3.1.4 Grade point average

The mean GPA for all target students was 2.50 in the first quarter, 2.46 in the second quarter, 2.41 in the third quarter, and 2.71 in the fourth quarter. Like discipline referral rates, the means were a little different, but the trend was similar for all but one of the subgroups; descending slightly in the second and third quarters and rising in the fourth quarter of the school year. For students whose GPA was less than 2.0 in the first quarter, their mean GPA by quarter were 1.48, 1.54, 2.65, and 2.91. See. Figure 1.

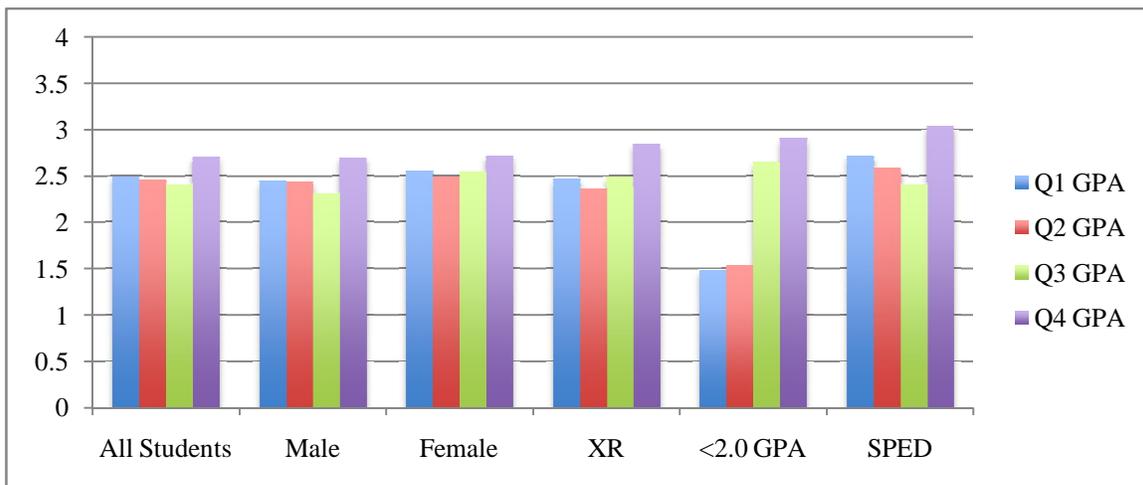


Figure 1: Year 1 GPA

3.1.5 Percentage remaining in school

No target students dropped out of school. 100% maintained school enrollment through the end of the year.

3.1.6 Completion of individual graduation plans (IGPS)

Each year, students at this rural high school are asked to complete or update Individual Graduation Plans to track progress toward on-time graduation. Not all students completed this task; however, 100% of the target students did complete their IGP.

3.1.7 Reading performance

Student participation in Xtreme Reading (XR) classes resulted in gains in student reading performance, as measured by the Test of Silent Contextual Reading Fluency (TOSCRF). In terms of Grade Equivalencies (GE), the mean gain for all XR students on the TOSCRF was 1.4GE with less than one year of instruction. Moreover, students in the lowest reading performance quartile (i.e., 25th percentile) on the pretest (GE=4.8) improved reading performance by an average of 1.6 GE with less than one year of instruction. See. Figure 2.

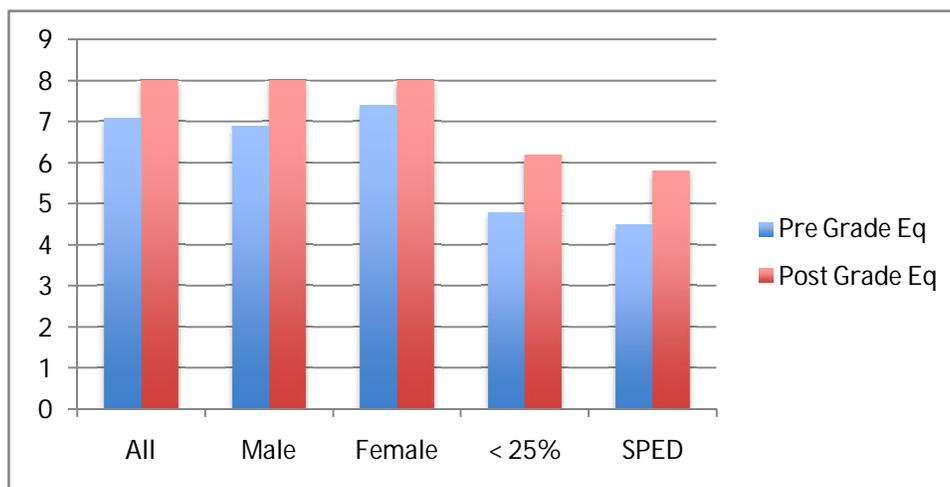


Figure 2: Year 1 Reading Performance

3.1.8 Sense of connectedness

Forty-four students provided anonymous responses to the questionnaire in the fall (32 in spring). From the analysis of fall to spring differences in the percentages of responses for each of the connectedness items, a few outcomes were noteworthy.

A higher percentage of students reported feeling good or ok about themselves in the spring than in the fall. A higher percentage reported involvement in extracurricular activities in the spring than in the fall. There was stronger agreement among students in the spring than in the fall to an item asking if they had an adult to talk with at school. There was also stronger agreement among students in the spring than in the fall to an item asking if they had a peer to talk with at school.

3.1.9 Additional mentoring and workforce readiness participation

Thirty mentors met throughout the school year with target students. They met an average of twice per week. All target students participated in career workshops during the spring semester, addressing nine different career clusters. All target students participated in at least one of three job site visits, including visits to local manufacturing plants that hire for entry level positions each year. All students had an opportunity to participate in an end-of-year career fair that included a motivational speech from a young adult with statewide visibility.

3.2 Year 2

3.2.1 Absenteeism

On average, the entire group of target students was absent between two and three times per student in the first quarter of the school year (2.64), less often in the second quarter (1.72), perhaps slightly more often in the third quarter (1.89), and then less often again in the fourth quarter (1.52). The means were a little different but the trend was fairly similar across all of the subgroups.

That is, for males, females, students in the Xtreme Reading class, students whose GPA was less than 2.0 in the first quarter, students with disabilities, and students enrolled in the workforce development class, absenteeism was higher in the first quarter of the school year than in the second quarter, then typically increased in the third quarter, and dropped in the fourth quarter to a rate less than in the first quarter. In the case of students whose GPA was less than 2.0 in the first quarter, their rate of absenteeism was the highest among subgroups in the first quarter (4.20) (along with students with disabilities), but their absenteeism rate was the lowest among subgroups in the fourth quarter (1.0) (along with students enrolled in the workforce development class).

3.2.2 Discipline problems/referrals

Each target student received, on average, less than one office referral for disciplinary infractions in the first quarter of the school year (.30). The mean rate dropped to .18 in the second quarter, rose slightly to .32 in the third quarter, and then dropped again to .15 in the fourth quarter. Like absenteeism rates, the means were a little different, but the trend was fairly similar for four of the six subgroups. For female students and students with disabilities, discipline referral rates did not rise in the third quarter, but remained the same during the second quarter and continued to decline in the fourth quarter. For students whose GPA was less than 2.0 in the first quarter, their mean discipline referral rate was nearly zero in the fourth quarter (.10) along with females (.05) and students in the workforce development class (.07).

3.2.3 Passage rates on state end of course assessments

There were three Ends of Course tests (EOCs) given in year two of this project, and not all target students completed each of the tests. 85% of target students that completed the *math* EOC passed. Among subgroups, passing rates were as follows: males (80%), females (91%), Xtreme Reading students (67%), students whose GPA was less than 2.0 in the first quarter (50%), students with disabilities (100%), and students enrolled in the workforce development class (60%). 64% of target students that completed the *English* EOC passed. Among subgroups, passing rates were as follows: males (56%), females (79%), Xtreme Reading students (0%), students whose GPA was less than 2.0 in the first quarter (50%), students with disabilities (29%), and students enrolled in the workforce development class (64%). 43% of target students that completed the *social studies* EOC passed. Among subgroups, passing rates were as follows: males (40%), females (50%), Xtreme Reading students (NA; no one completed this EOC), students whose GPA was less than 2.0 in the first quarter (0%), students with disabilities (0%), and students enrolled in the workforce development class (NA; no one completed this EOC).

3.2.4 Grade point average

The mean GPA for all target students was 2.75 in the first quarter, 2.59 in the second quarter, 2.48 in the third quarter, and 2.89 in the fourth quarter. Like discipline referral rates, the means were a little different, but the trend was similar for all but one of the subgroups; descending slightly in the second and third quarters and rising in the fourth quarter of the school year. For students whose GPA was less than 2.0 in the first quarter, their mean GPA by quarter was 1.61, 1.52, 1.52, and 2.12. See. Figure 3.

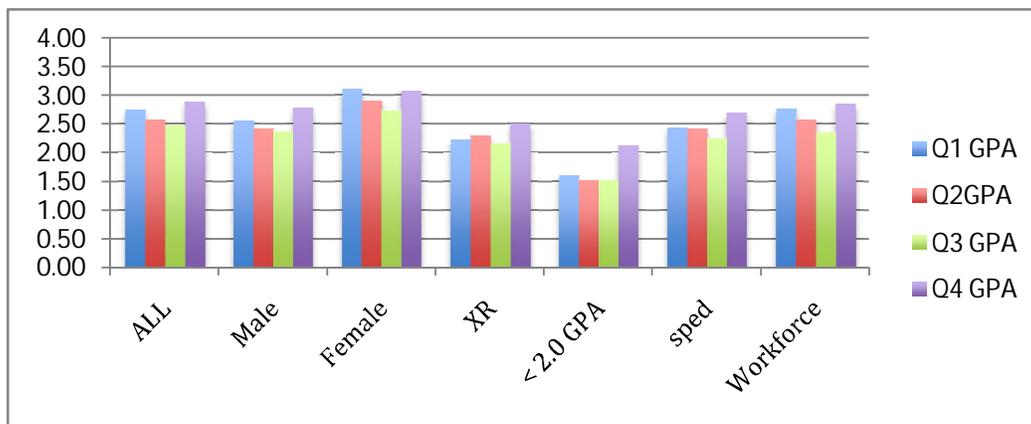


Figure 3: Year 2 GPA

3.2.5 Percentage remaining in school

96.72% of the target students maintained school enrollment through the end of year 2, including four who completed the year at other venues (e.g., virtual school), and four seniors who graduated. Two students did drop out.

3.2.6 Completion of individual graduation plans (IGPs)

96.72% of the target students completed their IGP. The percentage reflects the two students who dropped out.

3.2.7 Reading performance

Student participation in Xtreme Reading (XR) classes resulted in gains in student reading performance, as measured by the Test of Silent Contextual Reading Fluency (TOSCRF). The mean gain in reading performance for all XR students, as measured by Grade Equivalencies (GE), was 1.3 GE with less than one year of instruction. Moreover, students in the lowest reading performance quartile (i.e., 25th percentile) on the pretest (GE=4.3) improved reading performance by an average of 1.7 GE with less than one year of instruction. The two students also enrolled in the workforce development class made the greatest gains, given the extraordinary gain of one student. See. Figure 4.

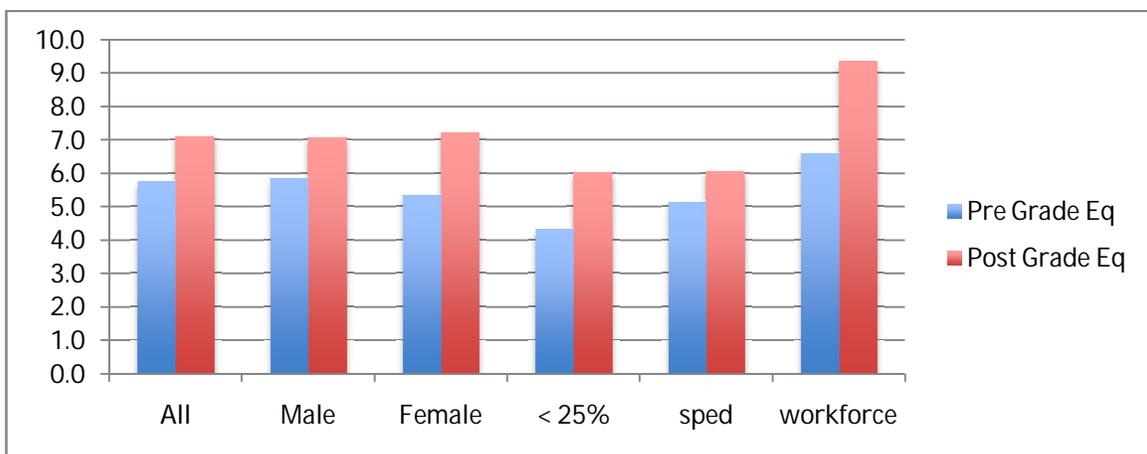


Figure 4: Year 2 Reading Performance

3.2.8 Sense of connectedness

Forty-one students provided anonymous responses to the questionnaire in the fall (37 in spring). From the analysis of fall to spring differences in the percentages of responses for each of the connectedness items, a couple outcomes were noteworthy. There was stronger agreement among students in the spring than in the fall to an item asking if they had an adult to talk with at school. Fewer students also expressed a desire to give up on school.

3.2.9 Additional mentoring and workforce readiness participation

Thirty mentors met throughout the school year with target students. They met at least twice per week. All target students participated in career workshops during the spring semester, with the exception of those that were no longer at the high school. The workshops addressed nine different career clusters. All participated in at least one of three job site visits, including visits to a local law enforcement agency, a health care provider, and a sports marketing agency. All students had an opportunity to participate in an end-of-year career fair that included sixteen local business/industries and representatives from two military branches, as well as a motivational speech from the national teacher of the year.

4.0 Discussion

As noted earlier, data from the National Assessment of Educational Progress have indicated that many secondary students lack sufficient literacy skills, and that students who receive free/reduced lunch, students from rural settings, and students with disabilities are particularly low-performing (National Center for Education Statistics, 2015). Such demographic variables have been linked to a higher risk for dropping out of school (e.g., Hammond, Smink, & Drew, 2007).

Other factors such as course failure in ninth grade, high absenteeism, and a poor sense of connectedness have also been linked to a higher risk of student dropout (Gordon, Downey & Bangert, 2013; Balfanz, Herzog & Mac Iver, 2007; Chapman, Buckley, Sheehan, and Shochet, 2013). Given that full-time employed individuals without a high school credential are likely to earn just \$23,900 per year as opposed to \$30,000 per year for peers with a high school credential (US Department of Education, National Center for Education Statistics, 2015), at-risk secondary school students require a comprehensive, research-based set of interventions to keep them in school, attend to existing literacy needs, connect them with people who care about them, and provide them with value-added opportunities that contribute to future success and well-being. The goal of Prepared for Graduation has been to do just that.

Results of this evaluation, reflected in the data regarding absenteeism, discipline referrals, GPA, percentage staying in school, reading performance, and sense of connectedness, in particular, suggest that Prepared for Graduation has promise for at-risk high school students. In each of the two years that data were collected, results suggested that major goals were met for this group of target students. That is, absenteeism and discipline referrals decreased, students stayed in school, GPAs went up, students closed the gap in reading performance, and sense of connectedness seemed to improve. One possible simple explanation for the positive outcomes on these marker variables, and in particular, the improvements toward the end of the school year, is that job site visits occurred during the later part of the school year. Students needed to be in good standing at school in order to be eligible to leave campus for the job site visits, and that may have functioned as a significant incentive. On the other hand, or in addition, the job site visits may have added a sense of relevancy to schooling, and that relevancy led to improvements on marker variables. In other words, the job site visits may have given the target students a reason to perform better in the later part of the school year when student performance is sometimes poorer.

Outcomes for students with the lowest GPAs at the beginning of the school year were, perhaps, the most encouraging. For instance, with regard to absenteeism, students whose GPA was less than 2.0 in the first quarter of the school year were absent notably less at the end of the year than at the beginning. This was true in Year 1 and 2. Students whose GPA was less than 2.0 in the first quarter had substantially fewer discipline referrals as the school year progressed and the number was as low or lower than all subgroups in each of the final three quarters of both school years when data were collected. Given that course failure in English and math, particularly in ninth grade, is cited as factor related to lack of connectedness and dropout (e.g., Hammond, Smink, & Drew, 2007), it was encouraging to see that the EOC passage rate for students whose GPA was less than 2.0 in the first quarter was better than the target group as a whole and all subgroups on math and biology EOCs, and similar to whole group and subgroup performance on the English EOC. With regard to GPA improvement, students whose GPA was less than 2.0 made this biggest GPA improvement from the first quarter to the fourth quarter of all subgroups in Year 1 and 2. One of the ultimate goals of Prepared for Graduation was, of course, keeping students in school and seeing them graduate prepared for college or the workforce. The goal appears to have been met. All fifty-eight ninth and tenth graders remained in school in Year 1, however, two of sixty-one in Year 2 did dropout out. Then again, all four target students who were twelfth graders in Year 2 did graduate.

Research has suggested that the academic performance of many low-performing students seems to plateau in middle school, which when given the continued and even increased demands placed on students in high school, results in an increasing gap between the performance of normally achieving students and low-performing students (Hock, et al, 2009). Thus, one real goal of Xtreme Reading, as a tiered intervention, is to close the reading performance gap for low-performing readers. The outcomes of this evaluation suggest that students in the lowest reading performance quartile (i.e., 25th percentile) who participated in Xtreme Reading as a tiered reading intervention improved reading performance. Given the difference in pre to posttest means, results suggest that after students participated in XR classes, they closed the gap between expected reading performance and actual reading performance, which is no small accomplishment for any low performing high school students. With some expected variation, student reading performance notably improved in Year 1 as well as Year 2 for students who participated in Xtreme Reading classes. Student sense of connectedness appears to be essential for reducing the at-risk behaviors of students who are academically low performing in high school (Chapman, Buckley, Sheehan, and Shochet, 2013). In particular, when at-risk youth believe that “adults and peers in the school care about their learning as well as about them as individuals” (CDC, 2009; p. 3), they may be more likely to continue to participate in school.

Hence, Prepared for Graduation included mentoring as a calibrated effort to enhance the sense of connectedness of targeted students. There were many anecdotal stories of the positive effects of mentoring on targeted students, and an anonymous questionnaire was given to students to try to gauge any differences in their sense of connectedness between the beginning and end of the school year. In years 1 and 2, there were a few differences that stood out in student questionnaire responses, however, one was deemed particularly important. There was stronger agreement among student respondents in the spring than in the fall to an item asking if they had an adult to talk with at school. That was certainly worth noting, given the investment of time and effort by mentors. It could be that other items on the questionnaire were not sensitive to differences in the sense of connectedness that target students experienced.

4.1 Lessons learned/future directions

Throughout the two years of this programmatic effort, high school teachers expressed a strong positive response to professional development opportunities, including the opportunity to design instruction lessons that integrated CLC Levels 1 and 2 intervention strategies. Administration provided enthusiastic support for program objectives and activities.

Many community partners/businesses expressed strong readiness to be engaged in mentoring and workforce ready components of the effort. Still, in evaluating all outcomes, several future objectives are as follows. First, expand opportunities for job site visits. Target students have a variety of potential workforce interests, and the school should pursue or designate resources to tap into a wider geographical range of opportunities, including more than one-time opportunities. Second, focus opportunities to attain Career Ready certification. During the second year, an elective class was designed to provide computer access to ACT Work Keys certification, a potentially value-added outcome of target students' high school education. Adequate time and professional guidance is needed to bring that to fruition for target students.

Third, mentoring support in Prepared for Graduation would be improved by increasing focus on the neediest students. That is, as mentors spend time with target students and provide a sense of connectedness, the mentors may find that additional community resources are needed to help the student or family. Enhancing this linkage with additional supports may be necessary. Fourth, given that, most of the students were high school freshmen, by design; further evaluation of Prepared for Graduation should include longitudinal follow up of those students through, and perhaps beyond, high school completion. Last, but not least, more sensitive indicators of connectedness may be needed. For example, conducting focus group conversations with students, or interviews, may provide additional or clearer evidence of changes in student sense of connectedness.

In conclusion, as student's progress from elementary grades to secondary grades, they not only face greater academic demands, but often other social-emotional challenges and questions about the future. For students who haven't acquired the requisite academic skills, the demands of mastering content often result in failure. In response to this demand, the Content Literacy Continuum offers a multi-tiered, research-based approach to addressing literacy across the school for all learners. Xtreme Reading, in particular, has been recently recognized as a promising practice by What Works Clearinghouse (Boulay, Goodson, Frye, Blocklin, & Price, 2015).

For students who are disconnected from adults and sometimes peers as well, the literature has clearly linked such conditions to a variety of risky behaviors (Chapman, Buckley, Sheehan, and Shochet, 2013). Mentors who cannot simply be a good role model, but provide a consistent and long-term relationship of care may be as much common sense as empirically valid. Moreover, providing a good reason to come to school (besides typical class instruction) may be vital leverage for assisting students toward graduation. That is, if students have opportunities to link school with preparation for (work) life outside school, school may have far greater relevance and attractiveness.

Academic interventions such as CLC or specifically Xtreme Reading, mentoring, and workforce development opportunities, whether for students with and without disabilities, require specialized, intensive, often individualized attention that translate to a significant investment of school time and monetary capital, sometimes even more than is anticipated (Hock, et al, 2009; Mastropieri, Scruggs & Graetz, 2003). That said, as Fuchs, Fuchs, and Vaughn (2014) insisted, "the cost of not providing intensive interventions (i.e., students exiting schools without the necessary skills to succeed) is more expensive" (p. 15).

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