Title:
Preventing School Dropout with Secondary Students: The Implementation of an Individualized Reading Intervention and Dropout Prevention Intervention

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Abstract Body

Limit 5 pages single spaced.

Background/context:

When students transition from the elementary grades to the middle school grades, they are faced with many new academic and social challenges (Balfanz et al., 2007). Academically, in the secondary grades, students must learn a variety of complex content using challenging text. To keep up with these demands, students must possess at least average literacy and problem-solving skills. Socially, these students may have difficulty fitting in with peers and face an array of challenges at home. These factors often make it difficult for students to stay motivated and invested in school, leading to school disengagement and soaring middle school and high school dropout rates.

Despite improved knowledge about effective reading interventions for students in the younger grades (e.g., Blachman et al., 2004; Vellutino et al., 1996), much less is known regarding effective interventions and reading instruction for students with reading difficulties in the middle and high school grades (Curtis & Longo, 1999; Scammacca et al., 2007).

A recent synthesis (Edmonds et al., 2009) examining the effects of interventions on the reading outcomes, particularly reading comprehension outcomes, of older students (grades 6–12) with reading difficulties reported on studies conducted between 1994 and 2004. Interventions addressing decoding, fluency, vocabulary, and comprehension were included if they measured the effects on reading comprehension. Twenty-nine studies were synthesized. Thirteen studies met inclusion criteria for a meta-analysis. The aggregate effect size was large (\(d = .89\)) for the weighted average of the difference in comprehension outcomes between treatment and comparison students. Word-level interventions were associated with modest effect (\(d = .34\)) in comprehension outcomes between treatment and comparison students. Findings from the interventions revealed that older students with reading difficulties benefit from reading interventions primarily in the areas of word study and reading comprehension strategy instruction. Effective vocabulary and fluency practices were also identified. (See the Secondary Reading Guide, Center on Instruction, 2008.)

Missing from current research are systematic examinations of intensive instruction for older students with reading difficulties. Several promising essential components of effective reading interventions for older students with reading difficulties have been identified. Unfortunately, a majority of these interventions spanned fewer than 10 weeks and were designed to test the effectiveness of one element of intervention of reading instruction rather than the efficacy of several fully developed elements of intervention combined.

In addition to intervening academically with students, it is important to intervene with students at risk for dropping out of school. It is concerning that recent estimates (Mishel & Roy, 2006) based on the National Education Longitudinal Study (NELS) suggest that only 75% of African Americans and 75% of Hispanic students graduate from high school when progress is tracked longitudinally. Cross-sectional estimates are generally in the 50% range. High rates of student dropout can lead to an economic drain on society (Dynarski, Gleason, Rangarajan, & Wood, 1998). Students who dropout of high school and cannot read and write proficiently may not be able to participate fully in society in the future, contributing to problems such as increased crime and detrimental effects to our economy (August & Shanahan, 2006). For example, recent estimates state that dropouts from the class of 2006 will cost the nation more than $309 billion in
lost wages, taxes, and productivity during their lifetimes (Alliance for Excellent Education [AEE], 2007).

Dropping out of school is a gradual process of disengaging or disconnecting from school both physically and mentally (Finn, 1989). The process of disengagement starts early in the kindergarten years through a phase of withdrawal, intensifies during 4th to 7th grade with a disengagement phase, and results in many students dropping out of school by 10th grade (Balfanz et al., 2007). Because dropping out of school results from this gradual process of disengagement, it is possible for educators to intervene in this process to prevent dropout.

Purpose/objective/research question/focus of study:

The overall purpose of this study, funded by The U.S. Department of Education Institute of Education Sciences, is to contribute to the scientific knowledge about effective practices for (1) reducing dropout rates and (2) improving reading for at-risk, older students. Specific outcomes of the proposed work will include an improved knowledge base about experimentally derived practices for schools to both enhance literacy outcomes and reduce dropout for students with reading difficulties. Note that because we began implementation of the study recently in late Spring of 2010, we will describe our research design, criteria for inclusion, interventions, as well as significant challenges we have encountered while implementing this large scale experimental study in the high school setting.

Specifically, the purpose of the study is to conduct a carefully controlled efficacy trial of an intensive, individualized reading intervention, Reading Interventions for Adolescents (RIA), and a dropout prevention intervention, Check & Connect ([C&C]; Sinclair, Christenson, Evelo, & Hurley, 1998; Sinclair, Christenson, & Thurlow, 2005), in a demographically diverse setting that represents a range of ethnically and linguistically students. In terms of overall educational impact, this study is important because:

1. Students with reading difficulties are at greater risk of dropping out, yet there is insufficient evidence of what interventions are most effective in improving outcomes.
2. Although there have been preliminary studies of a few dropout prevention programs, there is little information on how implementation can moderate program effects or how these programs may work in concert with more individualized, reading-focused interventions.

We are investigating the following research questions:

1. What is the efficacy of an intensive, individualized reading intervention with adolescent struggling readers compared with a well-documented, school-implemented comparison group; a dropout intervention only comparison group; and an intensive, individualized reading intervention plus dropout intervention comparison group?
2. What is the efficacy of a dropout prevention intervention with adolescent struggling readers compared with a well-documented, school-implemented comparison group; an intensive, individualized reading intervention only comparison group; and an intensive, individualized reading intervention plus dropout intervention comparison group?
3. What is the efficacy of a dropout prevention intervention plus an intensive, individualized reading intervention with adolescent struggling readers compared with a well-
documented, school-implemented comparison group; a dropout intervention only comparison group; and an intensive, individualized reading intervention only comparison group?

**Setting:**

The intervention takes place in 3 diverse high schools in Pflugerville, Texas. Students participating in the reading intervention (N=171) participate during one 45-50 minute period of their regular school day that replaces an elective credit. Students participating in the dropout intervention participate throughout the day as needed and participate in bi-weekly group sessions during another elective period.

**Population/Participants/Subjects:**

Eighth grade students in 5 middle schools in the metropolitan area of Austin, Texas (Pflugerville Independent School District) were screened to determine qualification for the study. Students qualified based on the following criteria: (1) To identify struggling readers, all students scored 2200 or below on 7th grade Reading Texas Assessment of Knowledge and Skills [TAKS], a minimal standards test that is designed to measure reading comprehension. (one standard error above failing score 2100) or (2) IF they did not have TAKS scores available they qualified if there was evidence that they failed any core class (ELA, Social Studies, Science, Math) any semester in 7th grade or 8th grade semester 1. We also examined these students’ rates of engagement. Specifically, students who qualified also met some level of the following criteria: (1) The student has been retained (data from last two years), (2) The students was absent more than 10% of the time during their 7th grade year, (3) The students had between 5-21 or more disciplinary referrals/student conduct violations during their 7th grade year, (4) The student was tardy more than 10% of the time during their 7th grade year. (5) The student failed Math, ELA, Social Studies, OR Science either in semester 1 or 2 during their 7th grade year or in semester 1 during their 8th grade year.

Students who qualified for the study (N=152 from each of 3 high schools) were randomly assigned to 1 of 4 conditions: (1) reading intervention only, (2) dropout prevention intervention only, (3) reading plus dropout prevention intervention, (4) a typical school practice/business as usual comparison condition. Assent was obtained for students to participate in the study. After assent and attrition, we currently have 88 students enrolled in the reading only condition, 105 students enrolled in the DO only condition, 83 students enrolled in the reading and DO condition, and 100 students enrolled in the business as usual comparison condition.

**Intervention/Program/Practice:**

**Intervention One: Reading Interventions for Adolescents (RIA)**

Wexler and Vaughn (2008) developed RIA with funding from NICHD (Fletcher, Vaughn, Francis, & Denton, 2006) to provide an organized, individualized intervention designed to meet the varying needs of older students with reading difficulties. Because a key factor of
being at risk for dropout is a poor academic record and, specifically, low-level literacy skills (AEE, 2002), a key component of dropout prevention that requires investigation is the effects of a strong literacy intervention to improve success in school, resulting in higher engagement and motivation to stay in school, and thus reducing dropout rates.

RIA capitalizes on many of the necessary features of standardizing an intervention (e.g., prescribing the instructional elements, such as word study and comprehension) while also providing the teacher with the opportunity to respond to the individual needs of students, emphasizing more word study, vocabulary development, or comprehension as needed. Capitalizing on the knowledge base of well-developed and effective interventions with younger students (e.g., Lovett et al., 1994; McMaster, Fuchs, Fuchs, & Compton, 2005; Torgesen et al., 2001), we realized that effective treatment for older students would not have the restricted range of reading difficulties exemplified by younger students. Teachers primarily focus on upper level multi-syllabic word study instruction and comprehension and vocabulary strategy instruction designed to promote access to upper level content area social studies and science expository text. The “mini-units” are designed to reflect the “curriculum bundles” followed by the content area PISD teachers. Students also engage in perspective taking and debate on topics related to the content of the text they read.

Using progress-monitoring data, teachers adjust instructional decisions to meet the needs of their students. Teachers interpret the data and are reflective and dynamic in planning instruction. Teachers determine whether students have mastered, are emerging, or are still deficient in a target area (e.g., producing main idea statements). We also implement a motivation component by providing, for example, flexibility in text choice, student/teacher conferencing, and goal-setting and monitoring opportunities. The intervention addresses the educational challenges of enhancing reading outcomes for students who have a variety of special needs.

**Intervention Two: C&C Dropout Prevention Intervention**

C&C (Sinclair et al., 2005; Sinclair et al., 1998) is a fully developed model of sustained intervention used to enhance and maintain students’ engagement with school. Overall, the C&C model of student engagement includes seven core elements: routine monitoring of alterable indicators of engagement, individualized and timely intervention, relationship building, persistence plus, following mobile students from school to school, problem solving, and promoting affiliation with school and learning (Sinclair et al., 2003). Of the 11 dropout prevention programs cited on the What Works Clearinghouse, C&C has the highest impact for helping students stay in school. The What Works Clearinghouse also cites C&C as one of the most widely used dropout prevention programs (http://ies.ed.gov/ncee/wwc).

The “check” component involves continuous assessment and monitoring of student levels of engagement. The “connect” component involves a basic intervention and a more intensive intervention for students who need it. The basic intervention component is prevention involving ongoing contact with the student, together evaluating levels of engagement in school and problem solving any issues that need attention. The intensive intervention is administered for students at high risk for disengagement in school. This may include high-level role-playing and problem solving as well as support for learning. Overall, C&C aims to promote students’ engagement with school, reduce dropout, and increase school completion. Monitors check in at least daily with students regarding academic and social factors, such as skipping classes, attendance, behavior, and graduation credit plans. Having a caring adult to connect with at
school is associated with school engagement and, therefore, reducing dropout rates (Belfield & Levin, 2007), and by implementing interventions that provide attendance, behavioral, and academic support, graduation rates can be increased (Balfanz, Herzog, & MacIver, 2007).

**Research Design:**

Students serve as the unit of assignment and analysis in this randomized field trial to compare the efficacy of the interventions. The interventions are provided to students in their 9th and 10th grade years, and follow-up measures of cognitive and behavioral outcomes will be collected during their 11th and 12th grade years.

**Data Collection and Analysis:**

Key outcomes of reading, language, and engagement include the Test of Word Reading Efficiency, Gates MacGinitie Reading Tests, AIMS Web Maze, AIMS Web ORF, Test of Silent Reading Fluency, Woodcock Johnson III Spelling Subtest, Woodcock Munoz Language Survey, Student Engagement Instrument, Inventory of Callous Unemotional Traits, and The Perception of Ability Scale.

Growth modeling is used to estimate the effects of the intervention on reading outcomes with a nested-models comparison to evaluate statistical significance. Discrete time survival analysis is used to estimate the proportional odds of dropping out and any differences due to treatment. The effect of the combined treatment is evaluated by comparing nested models. Analyses examine learner characteristics (such as initial reading performance, primary language, demographic factors, and motivation) that may influence the strength of the relation between the interventions and student performance on reading and dropout measures.

**Findings/Results:**

The study is currently in year one and therefore, there are no key findings to date. We will be able to report on pre-test and progress monitoring data. We will also highlight several key lessons learned regarding the challenges of implementing experimental studies in the high school setting.

**Conclusions:**

Conclusions will be focused on decisions related to intervention modifications and lessons learned about implementing high school experimental studies.
Appendix A. References


