

Abstract Title Page

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Title:

Five Randomized Trials to Assess the Effectiveness of Adolescent Literacy Interventions:
Realities of Design and Implementation and Influences on Impact

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Abstract Body

Background/context:

Description of prior research and/or its intellectual context and/or its policy context.

Data from the National Assessment of Educational Progress (NAEP) show that in 8th grade, at a time when all students are expected to be able to acquire information through the reading of textbooks, 34 percent of boys and 24 percent of girls cannot read at the basic level (Grigg, Donahue, & Dion, 2007; Lee, Grigg, & Donahue, 2007). Among Black, and Hispanic students, the picture is even more discouraging: 49 percent of Black, and 45 percent of Hispanic 8th graders read below the basic level. Thus, by the time they reach high school, certain students have already been "left behind." NAEP data also indicate that 27 percent of 12th-grade public school students scored below the basic level and only 35 percent scored above the proficient level. Since 1992, NAEP scores have declined significantly in all reading contexts (i.e., reading for literary experience, reading for information, reading to perform a task). These findings reflect an urgent need to identify effective scientifically based programs for improving reading in high schools in the US.

Purpose/objective/research question/focus of study:

Description of what the research focused on and why.

Rigorous research provides information that will allow other schools and districts to select interventions that have a scientifically based track record of effectiveness. All Striving Reader grants include the mandate to evaluate literacy intervention(s) targeted to adolescents who are reading significantly below grade level. Although all studies followed the same guidelines for evaluation, each was implemented in a different context, evaluated different interventions or curricula, and utilized different evaluation designs. This symposium will bring together five evaluations to share information about the challenges in both designing and implementing the designs of such studies after two years of implementation. In addition, the consideration of implementation context in the interpretation of the results and what should be done when planning to implement will also be discussed. As a result evaluators hope to provide important information to those planning similar studies in school districts and other complex social settings.

Setting:

Specific description of where the research took place.

Springfield/Chicopee: In the 2006-07 school year, all five schools were eligible for Title I. In Springfield, twenty-nine percent of the students were African American, 52 percent were Hispanic, and 14 percent were white; 71 percent were identified as low-income, and 13 percent were identified as Limited English Proficiency (LEP) students. In Chicopee, 78 percent were white, 3 percent were African American, and 18 percent were Hispanic; 35 percent were identified as low-income, and less than 2 percent were identified as LEP students.

Newark: Nineteen middle schools participate and were selected because they 1) were eligible for Title I funding, 2) served a minimum of two grades across sixth-, seventh- and eighth-grades, 3) were not already using READ 180, 4) were categorized as "in need of improvement" under No Child Left Behind, and 5) served a minimum of 25 eligible students reading at least two grades below grade level, based on the 2006 New Jersey state assessment. In these schools, 58 percent

of students are African American, 41 percent are Hispanic, 88 percent are identified as low-income, and 7 percent are identified as being English Language Learners (ELL).

Memphis: Eight middle schools serving over 6000 students in grades six through eight in Memphis, Tennessee are participating in the Striving Readers project. Ninety-five percent of the students served by these schools are African American and 5 percent are Hispanic. Eighty-eight percent of these students are eligible for free or reduced priced lunch, and 3 percent are identified as English Language Learners.

Ohio: The Ohio Department of Youth Services (ODYS) system is made up of seven youth detention facilities, six designated male facilities and one a female facility, all participating. Students are assigned to a facility based on gender, type of offense and availability of space. High schools are located within each facility; a small number of students are middle school age. In May 2006, 1,628 students were enrolled. Seven percent of those students were female, 48 percent were African American, and 46 percent were white. The average length of stay for a student is about 10.5 months, although this varies substantially across students.

Portland: Four high schools, three middle schools, and three K–8 schools currently participate in the Portland Striving Readers grant. All 10 of these schools receive Title I funding; 65 percent of the students are identified as low income. On average, 28 percent of the students served by these schools are reading at least two years below grade level. None of the schools had achieved Adequate Yearly Progress at the time of the Striving Readers application in 2005. Fifteen percent of the students in the 10 schools are identified as English Language Learners, and 59 percent are non-white.

Population/Participants/Subjects:

Description of participants in the study: who (or what) how many, key features (or characteristics).

All Striving Reader grants include students who are reading two levels below their grade level (in some cases students who are not below a fourth grade reading level).

Springfield/Chicopee: Ninth-grade students are eligible and randomly assigned to one of the two targeted interventions or to the control condition: equally distributed among groups. Students are screened using the Scholastic Reading Inventory. Of the 334 students eligible in 2006-07, 285 were placed in the targeted interventions or in the control group in the fall.

Newark: The New Jersey State Language Arts assessment determines eligibility; special education students who meet district's eligibility requirements are included. Nineteen schools were randomly assigned; ten to implement READ 180 and nine to the control condition. In the first year of the study, 1,371 students participated in the evaluation.

Memphis: Eligible students score in the bottom quartile of the state assessment, the Tennessee Comprehensive Assessment Program (TCAP). In the first year of the study, 1740 struggling readers were randomized to the treatment or control group.

Ohio: All students incarcerated in the seven ODYS facilities who score below reading level, as measured by the Scholastic Reading Inventory (SRI), are eligible. In the first year of the study, 795 eligible students were randomly placed but only 461 receive instruction due intake

complications. The remaining students were either released early, were on lock down, or did not participate.

Portland: Eligible students' grades 7 through 10 were placed using the Oregon State Assessment Test or the Group Reading Assessment and Diagnostic Evaluation. In the first year of the study, 1,311 students were randomly assigned and 586 students were included (had both pre- and post-test scores).

Intervention/Program/Practice:

Specific description of the intervention, including what it was, how it was administered, and its duration.

The programs presented include versions of READ 180, developed by Scholastic Inc., and Xtreme Reading, developed by the University of Kansas Center for Research on Learning. In Springfield-Chicopee and Memphis, these programs were supplemental to the regular language arts curriculum; in the Newark, Ohio, and Portland they were incorporated into the regular arts curriculum as well as offered as supplements.

The *READ 180 program* is used to address the individual needs of struggling adolescent readers who are reading below grade level through adaptive and instructional software, teacher-directed instructional rotations, and the use of tailored textbooks and independent or modeled reading of high interest literature. The program focuses on elements of phonics, fluency, vocabulary, comprehension, spelling, writing and grammar, and promoting self-directed learning. The *Xtreme Reading program* represents one of the levels of instruction in the Content Literacy Continuum (CLC), the framework within the Strategic Instruction Model (SIM). The Xtreme Reading program (level three of the framework) focuses on strategy instruction, particularly reading instruction that helps struggling middle and high school students to develop accurate word recognition and increased fluency and comprehension. Xtreme Reading's core instructional approaches include direct instruction, teacher modeling, paired student practice, and independent practice.

Springfield/Chicopee: Teachers receive approximately 42 hours of training and coaching visits, generally one per month, for each intervention. READ 180 teachers were to receive a two-day initial training, a one-day follow-up training and an additional 8 seminars. Xtreme teachers were to receive a three-day initial training and four days of follow-up training during the year are provided.

Newark: The Newark Striving Readers project modified READ 180 to include some supplemental instruction aligned with the state assessment. For eligible students, the READ 180 curriculum replaces the district's regular core language arts curriculum. Teachers receive 20 hours of group training, five hours of training on using student assessment data to differentiate instruction, plus in-school coaching visits on an as-needed basis.

Memphis: Teachers were to participate in two all-day summer training sessions, and up to seven two-hour training sessions during the year. Teachers also had access to online professional development material and ongoing classroom support as needed. Students can receive the targeted intervention for two years.

Ohio: New teachers were hired to teach the Read 180 program; they were expected to attend 20 hours of professional development. In ODYS, Read 180 replaces the regular 45-minute literacy class for eligible students randomized to the treatment group. In addition, these treatment group students will also receive 45-minutes of additional instruction using the model, for a total of a 90-minute instructional block each day.

Portland: Professional development is offered to both participating teachers and literacy coaches for 7 days during the summer and monthly half-days during the academic year. In the first 2 years of the project, 2 teachers co-taught the Xtreme Reading class along with a content class such as language arts or social studies. Each school had 1 Xtreme Reading class per grade level, taught by the same pair of teachers (1 reading specialist and 1 content specialist).

Research Design:

Description of research design (e.g., qualitative case study, quasi-experimental design, secondary analysis, analytic essay, randomized field trial).

Each study is a randomized controlled field trial; Newark is a cluster-randomized field trial. The primary research question is whether or not the interventions or curricula implemented in these settings is effective in improving adolescent reading achievement for the targeted group as compared to the control group.

Springfield/Chicopee: Eligible ninth grade students receive the standard ELA curriculum. Eligible students are randomly assigned to participate in one of the two supplemental programs (READ 180 or Xtreme Reading) or to “business-as-usual,” which may consist of tutoring or an elective *in addition to* the “business-as-usual” standard ELA curriculum. Eligible teachers are also randomly assigned to teach READ 180, Xtreme Reading, or the control group.

Newark: Schools were randomly assigned to either implement READ 180 or to continue to provide only the regular language arts curriculum. Schools were blocked on four school-level variables prior to randomization: 1) school size, 2) proportion of ELL students, 3) proportion of students with special needs, and 4) AYP status.

Memphis: Students scoring in the lowest quartile on the English/Language Arts component of the TCAP are randomly assigned to receive the supplemental Read 180 class or to a control group. Students continue to receive instruction in the regular language arts curriculum. Students in the treatment group receive *READ 180* in addition to the regular language arts instruction.

Ohio: Incoming students scoring below reading level, as measured by the Scholastic Reading Inventory (SRI), are randomly assigned to either the Read 180 class or to a control group. Students maintain their assignment until released from the facility.

Portland: Prior to the start of each school year, eligible students in Grades 7–10 are randomly assigned to either the Xtreme Reading group or the control group. For Grades 7–8, the control group participates in the regular language arts curriculum; for Grades 9–10, the control group students participate in another elective course of their choosing.

Data Collection and Analysis:

Description of plan for collecting and analyzing data, including description of data.

Data are collected in all sites by the program which follows specified testing protocols. All sites have specified the use of multilevel modeling to account for the clustering of data with the exception of Springfield/Chicopee and Portland given those designs (they model the impacts of interventions on student outcomes using ANCOVA). All models will test intervention effects on achievement scores (students random assignment to group), controlling for pre-intervention reading levels and other covariates including school and cohort. A variety of covariates will be tested for inclusion in the analytical models. Where appropriate, analyses will also be run to disaggregate effects by grade level, gender, ELL, and special education. The outcome measures are as follows:

Springfield/Chicopee: Stanford Diagnostic Reading Test 4

Newark: Stanford Achievement Test-10, New Jersey State Language Arts assessment

Memphis: Iowa Test of Basic Skills, Tennessee Comprehensive Assessment Program

Ohio: California Assessment Test, Scholastic Reading Inventory

Portland: Oregon State Assessment Test, Group Reading Assessment Diagnostic Evaluation

Findings/Results:

Description of main findings with specific details.

First year finding across projects were fairly consistent in that preliminary impact results were observed for students in middle schools but not high schools. However, many of the studies relied on more than one cohort for analytic power to detect effects. These papers will present the analysis of over two years of implementation data to be reported to the Department of Education in early 2009. In Springfield/Chicopee, both interventions depend on a minimum of three cohorts of grade 9 students to assess effectiveness with appropriate power. In Newark, the impact of READ 180 on eligible students after one year, and after two years of implementation. The results that we propose to present will be based on an ITT analysis fitting a linear two-level model with student and school as the two levels. At the first level of the model, achievement for students within schools is predicted by a series of student characteristics. In Ohio, students in Read 180 for three consecutive terms have gained approximately 75 Lexile points on the SRI measure. This rate of growth is significantly beyond the rate of growth historically achieved by these youths.

Conclusions:

Description of conclusions and recommendations of author(s) based on findings and over study. (To support the theme of 2009 conference, authors are asked to describe how their conclusions and recommendations might inform one or more of the above noted decisions—curriculum, teaching and teaching quality, school organization, and education policy.)

Many schools are struggling to meet the needs of students who lack the reading skills required to succeed in high school and beyond. Because schools have finite resources, it is crucial that administrators allocate financial and human capital to literacy interventions promising the greatest potential for success. These studies are considered critical by the Department of Education to contribute to the field of adolescent literacy by addressing the primary research question of what interventions are effective. In addition, these studies are also some of the first to address what methods should be employed in such RCT trials including what is required in terms of policy for implementation and collaboration to conduct such efforts. Given the steady

push for more rigorous research and a corresponding dearth of information on this particular group of students, these papers add significantly to our understanding of both the benefits of an experimental research design and the latest research in the field of adolescent literacy. The presenters argue that while there are substantial challenges to conducting rigorous experiments in a school setting, the results can advance our understanding of both practical research methodology and the issue studied. The goal of this symposium is to present information regarding the benefits of such studies in the context of their complications.

Appendixes

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Appendix A. References

References are to be in APA format. (See APA style examples at the end of the document.)

Grigg, W., Donahue, P., and Dion, G. (2007). *The Nation's Report Card: 12th-Grade Reading and Mathematics 2005* (NCES 2007-468). U.S. Department of Education, National Center for Education Statistics. Washington, D.C.: U.S. Government Printing Office. Last Retrieved December 11, 2008 from <http://www.psywww.com/resource/apacrib.htm>

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