

Summary of Striving Readers Projects: Profile of Springfield and Chicopee Public Schools' Striving Readers Project and Evaluation

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Setting

The Springfield-Chicopee Striving Readers project is being implemented in two high schools in Chicopee, Massachusetts and three high schools in Springfield, Massachusetts. In Springfield, the high schools serve a majority of non-white students. In the 2006-07 school year, twenty-nine percent of the students were African American, 52 percent were Hispanic, and 14 percent were white. Approximately 71 percent of the students were identified as low-income, and 13 percent were identified as Limited English Proficiency (LEP) students. In Chicopee, the students were largely white (78 percent); three percent of the students were African American and 18 percent were Hispanic. Approximately 35 percent of the students were identified as low-income, and less than 2 percent were identified as LEP students. All five schools were eligible for Title I.

Intervention Models

Targeted Interventions

Classroom Model as Planned: Two targeted interventions for struggling readers are being implemented: READ 180 Enterprise Edition and Xtreme Reading, Level 3 of the Content Literacy Continuum (SIM-CLC). Treatment group students receive either READ 180 or Xtreme Reading, but not both.

The READ 180 program, developed by Scholastic Inc, aims 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 literature intended to be of high interest to adolescents. The program focuses on elements of phonics, fluency, vocabulary, comprehension, spelling, writing and grammar, and aims to promote self-directed learning. Daily assessments are provided by the READ 180 Topic Software and the Scholastic Achievement Manager (SAM) software provides feedback to teachers on student assessments. In addition, diagnostic testing using the Scholastic Reading Inventory (SRI) is conducted three times a year.

Xtreme Reading is one of the levels of instruction in the Content Literacy Continuum (CLC), a framework within the Strategic Instruction Model (SIM) developed by the University of Kansas Center for Research on Learning. The Xtreme Reading program focuses on 7 reading strategies: Vocabulary/LINCing, Word Mapping, Word Identification, Self-Questioning, Visual Imagery, Paraphrasing, and Inference. Xtreme Reading's core instructional approaches include direct

instruction, teacher modeling, paired student practice, and independent practice. The program provides end-of-unit assessments to track student progress.

Professional Development Model as Planned: Teachers who are new to READ 180 initially are offered a two-day training on the model and eight additional follow-up seminars during the year, both provided by the model developer. Teachers also are encouraged to use the Scholastic online training entitled “Best Practices for Reading Intervention.” Together, these trainings comprise about 42 hours of professional development in a year. Teachers also receive visits by a READ 180 coach eight times during the school year. In subsequent years of implementation, teachers continue to receive visits by the READ 180 coach, but at a slightly less intense schedule of six times during the school year.

Teachers in their first year of implementing Xtreme Reading also are offered about 42 hours of professional development training in an academic year, including a three-day initial training and four workshops during the year. An Xtreme Reading coach also visits teachers monthly over course of the school year. In subsequent years, teachers continue to receive monthly coaching visits from the coach by Strategic Learning Center (SLC), a professional developer under contract to the model developer.

Context for Implementation: Both models are being implemented as supplements to the district regular English language arts curriculum in the schools, replacing an elective course. Ninth-grade students reading at least two levels below grade level (but not lower than a fourth grade reading level) are eligible to be randomly assigned to participate in the one of the two targeted interventions, or to the control condition. Incoming ninth grade students are screened using the Scholastic Reading Inventory (SRI) to determine their reading level and eligibility for the targeted intervention, and eligible students can receive the interventions for up to three years. It is important to note, however, that the evaluation is focused only on ninth graders in their first year of participation in the interventions. Special education students are eligible for the interventions, unless their Individual Educational Plans (IEPs) prohibit them from being assigned to one of the intervention classes or their overall level of functionality precludes them from participating. In Year 1, 72 9th grade students were served by the READ 180 intervention and 70 9th grade students were served by Xtreme Reading. In Year 2, 66 9th grade students were served by the READ 180 intervention and 57 9th grade students were served by Xtreme Reading. The targeted interventions will each be implemented for a total of four years.

Whole School Intervention

Classroom Model as Planned: The Strategic Instruction Model (SIM) Content Enhancement Routines for Teachers (SIM-CERT) is a school-wide literacy-across-the-curriculum intervention developed by the Center for Research on Learning at the University of Kansas as part of the Content Literacy Continuum (CLC). The intervention is organized around a set of Content Enhancement Routines that teachers are trained to use in their instruction to help ensure mastery of critical content for all students (Level 1 of CLC) and to provide embedded learning strategy instruction in core curriculum courses (Level 2 of CLC). The goal of the program is to help teachers implement strategic teaching to ensure mastery of critical content for all students (Level 1 of CLC) and to provide embedded learning strategy instruction

in core curriculum courses (Level 2 of CLC). Content Enhancement routines include unit organizers, framing, vocabulary LINCing, and concept mastery. The professional developers also offered optional training on concept anchoring, concept comparison, lesson organizer, and course organizer.

Professional Development Model as Planned: Teachers new to SIM-CERT are offered about 24 hours of group professional development provided by Strategic Learning Center (SLC), a professional developer under contract to the model developer, which includes 16 hours of training on the Content Enhancement Routines and ongoing professional development where teachers select from a menu of training sessions on new content enhancement routines. In addition, teachers are offered in-school coaching from literacy coaches and by the developers, which altogether constitute approximately 17 hours of coaching for each teacher. After the first year of implementation, the amount of group professional development is variable, depending on which Content Enhancement Routines school administrators elect to have their teachers trained on. The in-class coaching continues at the same level in the second year of implementation.

Context for Implementation: The districts are phasing in SIM-CERT over the five years of the project with the goal of training approximately 90 percent of all teachers by the end of the grant. The districts will train approximately 25 teachers per school, 125 across districts per year beginning first with ELA, social studies, math and science teachers in tenth through twelfth grade. As teachers receive whole school intervention training, all of their students, regardless of their reading ability, receive instruction informed by the whole school intervention. For students assigned to Xtreme Reading, SIM-CERT represents Levels 1 and 2 of an integrated model in which the targeted intervention is Level 3. For students assigned to READ 180, SIM-CERT represents a separate model. The whole school intervention is being delivered to all of the students in the 5 participating high schools. This includes approximately 7,100 students in grades 9-12 in each school year. The whole school intervention will be implemented for a total of four years.

Evaluation Design

Targeted Interventions

Research Questions:

1. Does participation in READ 180 improve ninth-graders' reading achievement as compared to the control group?
2. Does participation in SIM Xtreme Reading improve ninth-graders' reading achievement as compared to the control group?

Research Design and Methods: The effectiveness of each targeted intervention is being tested in ninth grade.¹ Eligible ninth grade students are randomly assigned to participate in one of the two supplemental programs (READ 180 or Xtreme Reading) or to “business-as-usual,” which consists of the standard ELA curriculum. Eligible teachers are also randomly assigned to

¹ Students who continue to read below grade level (including students in the control group in ninth grade) following one year of participation are assigned to continue with READ180 or Xtreme Reading for up to three years, although they are not included in the evaluation of the impacts of the two intervention models.

teach students randomly assigned to READ 180, Xtreme Reading, or the control group. Students in Xtreme Reading also receive instruction from ELA teachers trained as part of the whole school intervention, which is part of the same model as the targeted intervention. The evaluation is designed so that students in READ 180 and in the control group do not receive instruction from ELA or other content teachers who have received training in the whole school model; the whole school model is phased in over the 5 years of the grant, with the teachers serving READ 180 and control students being trained in the last cycle of training. Hierarchical linear models (students nested within schools) will be fit to assess the impact of each targeted intervention on student outcomes.

Control Condition: Students randomized to the control condition receive the regular ninth-grade English language arts curriculum as do students randomized to the targeted conditions. The business-as-usual condition for control students consists of any supplemental support as is normally provided in the district to students struggling in reading, such as tutoring. In the absence of supplemental support, students participate in other electives.

Sample Size: Across Years 1 and 2 of implementation, on READ 180, the evaluation included 128 9th grade treatment students and 114 control students across 5 high schools. On Xtreme Reading, the evaluation included 105 treatment students and 114 control students across 5 high schools.

Key Measures of Student Reading Outcomes (Source):
Stanford Diagnostic Reading Test, 4th Edition (External Test Publisher)

Whole School Intervention

Research Questions:

1. To what extent is the whole-school model (SIM-CERT) associated with improvements in students' reading proficiency each year and over time?
2. To what extent is the whole-school model (SIM-CERT) associated with additional indicators of student success (e.g., improved attendance rates) each year and over time?

Research Design and Methods: An interrupted time series analysis will be used to compare pre-program student achievement scores with post-program student achievement scores. As the whole-school model is phased in, students in the classrooms of trained teachers will receive instruction using this model. Therefore, variation in the timing of the whole school model (SIM-CERT) implementation will be used to identify pre- versus post- differences in student outcomes across the different schools. The outcome analysis will be conducted with cohorts of tenth graders' given the availability of state achievement test data over time. Future evaluation reports will include findings on the impact of the whole school intervention on student achievement. The interrupted time series evaluation design is made more rigorous with the inclusion of more than two years of post-implementation data.

Comparison Group: All schools in the study participate in the whole school intervention. Therefore, there is no comparison group.

Sample Size: In the first year of implementation, districts reported training 110 teachers. Based on anonymous survey responses, 90 teachers indicated that they had received the whole school intervention training (SIM-CERT). Of the 90 teachers, 21 taught Xtreme reading and ELA, 21 taught History and Social Studies, 19 taught Science, 18 taught Math, and 18 taught other content such as Art (7 reported teaching in more than one content area). Each year, the district serves approximately 2,400 students in grade 9. The interrupted time series will include all 9th grade students in the five participating schools in each of the school years included in the analysis.

Key Measures of Student Reading Outcomes (Source):

Massachusetts Comprehensive Assessment System: English Language Arts (State Test)

Year 2 Evaluation Findings

Targeted Interventions

Fidelity of Implementation of the Targeted Intervention Model: In terms of fidelity of implementation of the *professional development model*, in Year 1 of implementation, fewer than half of the schools reached an adequate level of staff participation in the professional development activities provided for each of the targeted intervention models; a third of the READ 180 teachers and 40% of the Xtreme Reading teachers had adequate participation in training and professional development. The level of participation in professional development rose in Year 2 of implementation, up to 40% of READ 180 with adequate staff participation in training and 80% of Xtreme Reading teachers.

In terms of fidelity of implementation of the *classroom model*, fidelity was rated as low, moderate or adequate, based on a combination of classroom observations and staff surveys. For READ 180 classrooms, half of the teachers were rated as implementing at an adequate level of fidelity in Year 1 of implementation while no additional teachers were rated at a moderate level of fidelity. In Year 2 (2007-08), the majority of READ 180 teachers were rated as implementing with either adequate or moderate fidelity. For Xtreme Reading, in Year 1 of implementation, 60% of teachers implemented at an adequate level and 20% at a moderate level of fidelity; these proportions decreased in the second year, to 40% of teachers implementing at a moderate level of fidelity and no teachers implementing at an adequate level of fidelity.

Impact of the Targeted Interventions on Student Reading Outcomes: Neither of the targeted interventions, READ 180 or Xtreme Reading, had statistically significant impacts on student reading scores at the end of 9th grade. The overall effect size for READ 180 was .11; for Xtreme Reading, the effect size was .16.

Whole School Intervention

Fidelity of Implementation of the Whole School Intervention Model: In terms of fidelity of implementation of the *professional development model*, in Year 1 of implementation, nearly all of the teachers who were designated to be trained on the model (92%) attended the initial training, and 84% participated fully in the follow-up training seminars during the year. In Year 2 of the program, comparable numbers of new teachers participated in the initial training

(98%) and ongoing training (24%). Among teachers in their second year of implementation, 65% participated in the follow-up training.

Summary of the Strengths and Weaknesses of the Impact Evaluation of the Targeted Intervention:

Strengths

- Eligibility for random assignment was determined systematically, using a predetermined cutoff score on a test of reading achievement (Scholastic Reading Inventory (SRI)).
- Random assignment was faithfully executed, with no evidence of students receiving the intervention after being randomized to the control condition.
- There is no evidence that there are other factors (e.g., other reading programs or district policies) that were implemented in ways that would undermine the evaluators' ability to attribute impacts to Read 180 or Xtreme Reading.
- The reading tests used as outcome measure, the SDRT-4, assess decoding, vocabulary, and reading comprehension, and was developed by an external test publisher. There is no reason to believe that students assigned to the treatment group have more experience taking the test than do the control group students, or that the test measures skills specific to the intervention, both of which could undermine confidence in the impact estimates.
- Few students were unable to participate in follow-up data collection, suggesting that the integrity of the original randomized design was preserved, and that treatment and control groups continue to be statistically equivalent on all measured and unmeasured characteristics at follow-up. No differences in pre-study reading achievement or other demographic characteristics were noted on the students included in the analysis at follow-up.
- When estimating impacts, appropriate analytic steps were taken to account for the clustering of students within schools. A pre-study measure of reading achievement was included in the statistical models to increase the precision of the impact estimate.

Weaknesses

- The year two evaluation report, which includes findings from the first two years of implementation, includes a sample of students large enough to detect an impact (in standard deviation units) of the intervention on reading achievement equivalent to .18 on the standardized test (Stanford Diagnostic Reading Tests – 4th Ed. (SDRT-4) for grade 9.² Because Springfield-Chicopee plans to offer the interventions to new groups of students for four school years, future reports will have larger sample sizes and be able to detect smaller impacts.

² Abt Associates staff calculated the MDE by multiplying the standard error of the impact estimate by 2.8. This calculation produces the MDE for a two-tailed test with 80% power, and with an alpha level of .05, and accounts for clustering and for the inclusion of the covariates in the model.

