

Summary of Striving Readers Projects: Profile of Danville School District's Striving Readers Project and Evaluation

Grantee: Danville School District

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Local Evaluator: CCLD

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Project Website: <http://www.danville.k12.ky.us/district/programs/KCLCWebPage/index.htm>

Setting

Ten middle schools, nine high schools and two 6-12 schools in seven rural school districts in central, northwest, and eastern Kentucky are participating in the Striving Readers project. All schools are eligible for Title I services, and about half of the students (49 percent) served by these schools are identified as eligible for free or reduced priced lunch. Across the 21 schools, 21 percent to 91 percent of students scored below proficient on state reading tests in 2005. These schools serve predominantly white students (91 percent), while 5 percent of the students are identified as African American.

Intervention Models

Targeted Intervention

Classroom Model as Planned:

The Learning Strategies Curriculum (LSC), developed by the University of Kansas Center for Research on Learning as one component of the Strategic Interventions Model (SIM), is a curriculum aimed at strategies for word identification, comprehension, vocabulary, and fluency among struggling adolescent readers. The model includes reading materials with content written specifically for and designed to be of high interest to adolescents by including connections to their everyday experiences. Springboard novels, picture books, and articles are also used to support standards integration and build background for comprehension strategies. Frequent grade level and instructional level curriculum based measures are used for reading and writing. Informal reading diagnostics from the Ekwall/Shanker Reading Inventory fourth edition are also used.

Each classroom has a tablet PC to serve as a method of delivery system to whole or small group. Some classrooms use tablet for Visual Imagery Strategy. Some classrooms use a listening center where students can access models of fluency, record themselves while reading, monitor their own fluency levels, and listen to audio books based on individual needs. Some classrooms use blogging or software supports for pre-requisite skills needed prior to strategy instruction.

Professional Development Model as Planned: Teachers who are new to LSC are initially offered 5 half-day workshops with 6 half-day follow-up sessions, totaling 33 hours of training per teacher provided by the model developer. Each new teacher is also offered 9 site

visits by a CTL mentor coach and 3 coaching visits by the LSC trainer, totaling an estimated 12 hours of support per teacher. In subsequent years, returning teachers are offered 2 days of workshops and 6 half-day follow-up sessions. Additionally, teachers are offered bimonthly distance learning sessions for a total of 37 hours of training per teacher provided by the model developer. Teachers are offered 3 to 4 visits throughout the year from a CTL mentor coach for a total of 3-4 hours of support.

Context for Implementation: The Learning Strategies Curriculum is being implemented as a supplement to the district’s regular English language arts curriculum in the schools, replacing an elective course. The targeted intervention serves sixth- and ninth-grade students who scored at least two grade levels below their current grade level on the GRADE reading assessment at the beginning of the school year. Special education students are excluded if they are categorized as functionally mentally disabled or are enrolled in special education for all core classes. Struggling readers can receive the intervention for one year. In year one, 442 students in grades 6 and 9 were served by the intervention. In the second year, new cohorts of 6th and 9th graders were served, totaling 387 students. The targeted intervention will be implemented for a total of four years.

Whole School Intervention

Classroom Model as Planned: The Adolescent Literacy Model (ALM) was developed by the Collaborative for Teaching and Learning at the University of Kentucky to help all core subject and auxiliary teachers improve student content learning by applying literacy strategies during instruction. These strategies include vocabulary development, reading comprehension, verbal fluency, writing to learn, writing to demonstrate learning, and academic dialogue.

Professional Development Model as Planned: Teachers new to the Adolescent Literacy Model are offered 5 days of training at the Teacher Institute provided by the model developer. This training totals 30 hours per teacher. New teachers are also offered mentoring opportunities from the school literacy coaches. Subsequent training for returning teachers includes 1 day of common trainings, 1 day of school-specific sub-domain trainings, 2 days of school institutes and 2 half-day department-specific trainings per discipline per school and as needed. These trainings are offered by the model developers and total 24 hours per teacher and as needed.

Context for Implementation: All students in participating schools are receiving instruction in the whole school intervention. In years 1 and 2, over 13,000 students in grades 6-12 were served by the 21 intervention schools. The whole school intervention will be implemented for a total of four years.

Evaluation Design

Targeted Intervention

Research Question:

1. What is the impact of the Learning Strategies Curriculum on the reading achievement, reading motivation, and reading strategy use of struggling readers?

Research Design and Methods: Within-schools, struggling readers are randomly assigned to either receive the supplemental LSC class or to the control group. The impacts of LSC on student outcomes will be estimated using multilevel models to account for nesting of students within schools.

Control Condition: Students randomized to the control group continue to receive their regular elective courses in place of the LSC class.

Sample Size: Across the first two years of implementation, 317 students in grade 6 were randomized to the treatment group and 266 to the control group across 12 middle schools. In the 11 high schools, 365 students in grade 9 were randomized to the treatment group and 315 to the control group.

Key Measures of Student Reading Outcomes (Source):

Group Reading Assessment Diagnostic Evaluation (GRADE) (External Test Publisher)
Metacognitive Awareness of Reading Strategies Inventory (MARSI)
Motivation to Read Questionnaire (MRQ)

Whole School Intervention

Research Questions:

1. To what extent does the Collaborative Model for Content Literacy impact students' reading achievement, reading strategy use, reading motivation, and content area achievement?
2. To what extent does the profession development model used by the Collaborative Model for Content Literacy improve teacher sense of literacy teaching self efficacy?

Research Design and Methods: An interrupted time series analysis with a comparison group will be used to compare pre-program student achievement scores with post-program student achievement scores.

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 and comparison schools.

Comparison Group: The sample will also include collection of school-level aggregate test scores from 21 comparison schools that did not implement the intervention. Comparison schools are matched to intervention schools on ethnicity, region, and proportion of at-risk students.

Sample Size: The whole school intervention is being delivered to all students in the 21 treatment schools (10 middle schools, 9 high schools and 2 schools with grades 6-12). All students in the schools will be included in the sample for the evaluation, totaling approximately 13,000 students in a single year. There are also 21 comparison schools that will be included in the evaluation of the whole school model.

Key Measures of Student Reading Outcomes (Source):

Group Reading Assessment Diagnostic Evaluation (GRADE) (External Test Publisher)

Year 2 Evaluation Findings

Targeted Intervention

Fidelity of Implementation of the Targeted Intervention Model: In terms of fidelity of implementation of the *professional development model* in Year 1 (2006-07), 100% of teachers implemented the intervention at a high level. In the second year of implementation (2007-08), all of the teachers continued to implement at a high level (100%).

In terms of fidelity of implementation of the *classroom model* ratings of the fidelity of implementation of the program model were based on classroom observations and teacher interviews. In year 1 of implementation, teachers of grade 6 did not achieve high fidelity of overall implementation of LSC instruction, but did achieve high fidelity of teacher attendance. Teachers of grade 9 achieved overall implementation of LSC instruction and teacher attendance with high fidelity in year 1. In the second year of implementation, both 6th and 9th grade teachers reached high fidelity on the overall implementation of LSC instruction but not on teacher attendance. The 9th grade teachers continued to reach high fidelity in year two.

Impact of the Targeted Intervention on Student Reading Outcomes: There were no significant impacts of the targeted intervention on the reading achievement of students in grade 6 or 9 who received one year of the treatment, with effect sizes of .10 and .11, respectively.

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 one (2006-07), 86% of teachers in the middle schools, 84% teachers in the high schools and 100% of teachers in the 6-12 schools achieved adequate levels of participation. In year two of implementation, these levels decreased to 85% in middle schools, 81% in high schools and 78% in the 6-12 schools.

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 (GRADE).
- 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 The Learning Strategies Curriculum.
- The reading test used as an outcome measure (GRADE) assesses vocabulary, comprehension, and oral language, 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

- In grade 6, 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. With respect to measured characteristics, no differences in pre-study reading achievement or other demographics were noted between the treatment and control 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 is included in the models to increase the precision of the impact estimates.

Weaknesses

- In grade 9, 25.4% of the students randomized were unable to participate in follow-up data collection. The rate of attrition was different in the treatment and control group (20.8% versus 30.2% respectively). The 9.3 percentage point difference in the attrition rate borders on high by convention, suggesting that the treatment and control groups may no longer be equivalent on all measured and unmeasured characteristics at follow-up. With respect to measured characteristics, no differences in pre-study reading achievement or other demographics were noted between the treatment and control students included in the analysis at follow-up. However, to the extent that the groups differ on unmeasured characteristics, the estimated impacts in grade 9 may contain bias.
- 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 .20 on the standardized test (GRADE) for grades 6 and 9.¹ Because Danville plans to offer the intervention to new groups of students for four school years, future reports will have larger sample sizes and be able to detect smaller impacts.

¹ 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.