

# Summary of 2006 Striving Readers Projects: Profile of Chicago Public Schools' Striving Readers Project and Evaluation

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## Setting

Sixty-three Title I schools serving sixth- through eighth-grade students in the Chicago Public School system were selected to participate in the Chicago Public Schools Striving Readers (CPS-SR) Project. The vast majority of the schools in the CPS-SR project are located in communities that are economically disadvantaged and racially segregated. On average, 93 percent of students in the CPS-SR schools receive free or reduced priced lunch. Across the schools, 57 percent of the students are African-American, 37 percent are Hispanic, 3 percent are white, and 3 percent are from other ethnic groups; however, nearly all CPS-SR schools are comprised of one predominate racial or ethnic group. Eight percent of the students are classified as having Limited English Proficiency.

## Intervention Models

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### Targeted Intervention

**Classroom Model as Planned:** The Chicago Striving Readers Program was developed specifically for this district, in consultation with Dr. Donna Ogle (National-Louis University). The program is a blended intervention model of instruction in comprehension, fluency, vocabulary, and word identification. The model is designed to help facilitate gradual release of responsibility from teacher to students within a whole group/small group/whole group configuration. The program has three reading instruction components: (a) direct vocabulary instruction (developed by Marzano & Assoc for Supervision and Curriculum Development (ASCD)); (b) Partner Reading in the Content Area Too for fluency, comprehension, vocabulary development (developed by D. Ogle, National-Louis University); and text set units related to subject area content/ formats (developed by D. Ogle, National-Louis University).<sup>1</sup>

Students in the treatment schools are assigned to tiers based on their reading skills, as assessed on the Stanford Achievement Test (SAT) or, for students missing a SAT score, the Basic Reading Inventory. Tier 1 includes proficient readers; Tier 2 consists of struggling readers who could reach grade level with focused classroom support; and Tier 3 are the struggling readers

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<sup>1</sup> For more information on the Chicago Striving Readers Program, please see the Chicago Striving Readers English Language Arts Curriculum and Achieving Maximum Potential Intervention Profile by Abt Associates, available at <http://www2.ed.gov/programs/strivingreaders/performance.html>.

who require long-term intensive support/ customized instruction. All tiers receive the whole-school intervention model of reading comprehension-focused literacy strategies. Tier 1 students receive the regular English Language Arts instruction. Tier 2 and Tier 3 students receive 20 minutes of targeted intervention daily during the regular English Language Arts class, during which differentiated instruction/ scaffolding/support is provided by the Literacy Intervention Teacher.

Tier 3 students also receive intensive instruction in an after-school supplemental literacy program, Achieving Maximum Potential program, (AMP), which uses an approach based on work by T. Shanahan of the University of Illinois at Chicago. Tier 3 students attend AMP four hours a week for extra help in building vocabulary, fluency, word identification skills, and background knowledge through interactive/diagnostic computer software. The AMP program includes books on tape, which students listen to while following the reading in their story books. Seven core comprehension strategies are taught in the AMP reading program: summarizing, previewing and predicting, questioning, visualizing, inferring, metacognition and text structure.

Technology is integrated into the English Language arts classroom instruction through a listening center where students can access models of fluency, record themselves reading, monitor own fluency levels, and listen to audio books; a media center with 3 computers and printer to support special intervention software and group or individual research; and 10 Alpha Smarts (hand-held computers) for note-taking, brainstorming, preparing graphic organizers, and taking spelling tests. The classroom model uses multi-leveled materials that are designed to be high-interest and integrated with technology and audio resources. "Text set" units, developed with collaboration of Donna Ogle and New Louis University staff, feature a variety of informational non-fiction texts at different reading levels and with varied text structures and organizational features.

The program makes use of screening, diagnostic, and progress-monitoring tools that are intended to help teachers adjust instruction to match student needs. Stanford Learning First ClassLinks and ClassViews, informal classroom assessments, comprehension rubrics, fluency snapshots, spelling inventories, teacher observation and checklists, student self-assessment, student interviews and students interest inventories

**Professional Development Model as Planned:** In the Chicago model, the professional development is the same for the teachers implementing the whole school intervention and the teachers responsible for implementing any components of the targeted and intensive interventions. In Year 1 of implementation (2006-07), teachers new to the intervention are offered 54-57 hours a year of professional development. This includes a 5-day Summer Institute, quarterly follow-up training sessions, and monthly Saturday Seminars. Teachers also have available in-class mentoring and technical assistance from district literacy coaches on an as-needed basis. In Year 2 of implementation (2007-08), teachers new to the intervention are offered the same level of professional development. Returning teachers are offered a 3-day Summer Institute and the same quarterly follow-up training sessions and Saturday Seminars. In addition, since a technology component was added to the classroom instruction model in the second year of the project, new and returning teachers are offered 6 hours of training on using the technology. In the third year of implementation, new and returning teachers are again offered a 3-day Summer Institute, the quarterly follow-up training sessions, and the technology

training, but the Saturday Seminars are not continued. In all three years, teachers are offered in-class mentoring and additional technical assistance as needed, from the district literacy coaches.

**Context for Implementation:** The Chicago Striving Readers program is being implemented in 31 middle schools. For students in Tiers 2 and 3, the Striving Readers program replaces 20 – 30 minutes of the regular English Language Arts class each day with small group work. For students in Tier 3, Grade 6 only, the small group work as part of the English Language Arts class also is supplemented with the AMP after-school program 240 minutes each week. Students in grades 6-8 are tiered based on their previous year’s score on the Stanford Achievement Test or the Basic Reading Inventory. Students who score up to one year below grade level are assigned to Tier 2, and students who score more than one year below grade level are assigned to Tier 3. All special education students participate in the program and are tiered similarly to the regular education students. Students may move between tiers throughout the three years of middle school, as they acquire stronger reading skills. In the first year of implementation (2006-07), the program was implemented in 16 treatment schools in Cohort 1. In the second year of implementation (2007-08), the program was implemented in 16 treatment schools in Cohort 2 and continued in the 16 Cohort 1 schools. Approximately 2,600 students in grades 6-8 were assigned to tiers 2 and 3 in Cohort 1 schools in each of the first two years of implementation, with 2,000 students assigned to tiers 2 and 3 in Cohort 2 schools the second year of implementation. In Years 3-5 of the project, the intervention will be implemented in Cohort 1 and Cohort 2 schools. The targeted intervention will be implemented for a total of five years.

## **Whole School Intervention**

**Classroom Model as Planned:** The goal of Chicago Striving Readers Program is to provide a seamless, aligned approach to reading instruction across language arts, social studies, science, and math for all readers across all grades. Therefore, in treatment schools, all students receive reading instruction guided by the Chicago Striving Readers Program, focused on five key comprehension strategies:

1. Direct / explicit vocabulary instruction: Systematic approach to teaching academic content vocabulary in all subjects using Robert Marzano’s *Building Background Knowledge*.
2. Partner reading (PRC2): a reading instructional framework developed by Dr. Donna Ogle to support reading comprehension and fluency of nonfiction text.
3. Text Sets: books intended to be of high interest used to help students read strategically, promote engagement and motivation, and deepen their content knowledge.
4. Aligned library support: aligning library materials and resources to support students in wide reading.
5. Technology integration: use of classroom computers and listening centers designed to support small group differentiated instruction.

**Professional Development Model as Planned:** The professional development for the targeted and the whole school interventions is combined. See description above for “Professional Development Model as Planned” for the Targeted Intervention.

**Context for Implementation:** All sixth through eighth-grade students in the 31 treatment schools (Tiers 1, 2, and 3) receive instruction guided by the Striving Readers project. Across the treatment schools, nearly 500 teachers are implementing the whole school model. Each year, the participating schools enroll approximately 5,900 students in grades 6-8. The whole school intervention will be implemented for a total of five years.

## Evaluation Design

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### Evaluation of the Targeted Intervention

#### Research Questions:

1. What is the impact of the Chicago Striving Readers Program on Tier 2 and Tier 3 students in grade six, defined as students reading below grade level?
2. What is the impact of the Chicago Striving Readers Program on Tier 3 sixth grade students, defined as those students reading two to three years below grade level?

**Research Design and Methods:** Two cohorts of middle schools have been randomly assigned to implement the Chicago Striving Readers Program or to continue implementing their current language arts curriculum. In the first cohort of 32 schools, 16 were assigned to Treatment and 16 to Control. In the second cohort of 31 schools, 15 were assigned to Treatment and 16 to Control. The school-level random assignment is maintained for the duration of the five-year study.

The impact of the Chicago Striving Readers Program will be analyzed using multilevel models, to account for the nesting of students within schools. Because random assignment was at the school-level, the intervention (or treatment indicator) is modeled at the school level (level two). Models will also be run to disaggregate effects by Tier, in order to examine the separate effect of the most intense services on the most struggling readers. Impacts will also be examined separately by grade level.

**Control Condition:** The students in control schools are not tiered, as in the treatment schools. Students in the control schools are in their regular language arts classes, instructed by teachers who attend the regular professional development offered by the school district and deliver instruction to students according to the regular language arts curriculum. For analysis purposes, students in the control school will be tiered post-hoc using the Illinois Student Achievement Test (ISAT). For example, Tier 3 students in the treatment schools will be compared to students in the control schools who also perform two to three years below grade level.

#### Sample Size:

Years 1 and 2: Sixty-three schools are participating in the evaluation. Across Years 1 and 2 of implementation, the evaluation included 225 grade 6 treatment students and 246 control students in Tier 2. For Tier 3, the evaluation included 549 grade 6 treatment students and 561 control students.

Year 3: In Year 3 of implementation, sixty-two schools are participating in the evaluation. The evaluation of one year of CPS-SR included 365 grade 6 treatment students and 353 control

students in Tier 2. For Tier 3, the evaluation included 346 grade 6 treatment students and 328 control students.

The Year 3 evaluation report includes findings for students after one and two years of the intervention.

- The analysis of the impact on students after one year of the intervention includes a sample of students large enough to detect an impact (in standard deviation units) on reading achievement equivalent to .32 on the standardized test (Illinois Standard Achievement Test) for Tier 2 students and .27 for Tier 3 students in grade 6.<sup>2</sup>
- The analysis of the impact on students after two years of the intervention includes a sample of students large enough to detect an impact (in standard deviation units) on reading achievement equivalent to .26 on the standardized test for Tier 2 students and .16 for Tier 3 students who were in grade 6 when they entered the intervention.

Future reports will be able to examine the impact of a student remaining in the targeted intervention for three years, which one might hypothesize would be larger than the impact of one or two years of the intervention.

### **Key Measures of Student Reading Outcomes (Source):**

Illinois Standards Achievement Test (ISAT) (State Test)

## **Evaluation of the Whole School Intervention**

### **Research Questions:**

1. What is the impact of the Chicago Striving Readers Program on all students in grades six through eight?

**Research Design and Methods:** Participating schools are randomly assigned to either implement CPS-SR or to continue with the existing literacy program. The same design will be used to assess the impacts of the whole school intervention as is being used to evaluate the impacts of the targeted intervention. The same analytic strategy is used to evaluate both the targeted and whole-school models.

Future evaluation reports will include findings on the impact of the whole school intervention on student achievement.

**Control Condition:** Control school teachers receive the regular professional development offered by the districts and deliver instruction according to the regular language arts curriculum. The control school teachers do not attend the Striving Readers professional development workshops.

**Sample Size:** The 63 schools in the study enroll approximately 5,500 students in grades 6 – 8. All students will be included in the evaluation of the impact of the Striving Readers program on the entire population of students (Tiers 1, 2 and 3).

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<sup>2</sup> 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.

The analysis of the effect of one year of implementation of the whole school intervention includes a sample of schools and students large enough to detect an impact of .09 (in standard deviation units) of the intervention on the ISAT. For the analysis of the effect of two years of the intervention, the sample is large enough to detect an impact of .13 on the ISAT. Future reports will also be able to examine the impact of a student remaining in the whole school intervention for three years, which one might hypothesize would be larger than the impact of one or two years of the intervention.

### **Key Measures of Student Reading Outcomes (Source):**

Illinois Standards Achievement Test (ISAT) (State Test)

## **Year 3 Evaluation Findings**

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### **Targeted Intervention**

**Fidelity of Implementation of the Targeted Intervention Model:** Fidelity of implementation of the *professional development model* was not calculated for the first year of the program. Only attendance was reported. On average, across the treatment schools, 87% of teachers attended the Summer Institute, 79% of teachers participated in the follow-up trainings, and 67% attended the Saturday seminars. In Year 2 (2007-08), across all of the components of professional development, teachers participated at a high level in 3% of the schools and at a medium level in 71% of schools. In Year 3 (2008-2009), although there were no schools where teachers participated at a high level, in 90% of the schools, teachers participated at a medium level in the professional development activities.

The fidelity of implementation of the *classroom model* was not calculated for the first year of the program. In Year 2 (2007-08), the classroom instruction model for the Tier 2 and Tier 3 students was implemented at a medium level of fidelity in 84% of schools. None of the schools implemented the classroom model at a high level of fidelity. The intensive classroom instruction model for the Tier 3 students was implemented at a high level of fidelity in 42% of schools, and at a medium level of fidelity in 55% of schools. In Year 3, (2008-2009), the classroom instruction model for the Tier 2 and Tier 3 students was implemented at a high level of fidelity at 64% of schools, and at a medium level of fidelity in 36% of schools. The intensive classroom instruction model for the Tier 3 students was implemented at a high level of fidelity in 68% of schools, and at a medium level of fidelity in 37% of schools.

**Impact of the Targeted Interventions on Student Reading Outcomes:** After one year of intervention, there were no significant impacts on the reading achievement of grade 6 struggling readers (those assigned to Tiers 2 and 3). The non-significant effect sizes for Tier 2 and Tier 3 were .08, for both.

After two years of intervention, there were no significant impacts on the reading achievement of grade 6 struggling readers (those assigned to Tiers 2 and 3). The non-significant effect sizes for Tier 2 and Tier 3 was .04 and .08, respectively.

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

### Strengths

- Eligibility for inclusion in the Chicago Striving Readers Program was determined systematically, using a predetermined cutoff score on a test of reading achievement (SAT 10 or the Basic Reading Inventory (BRI)).
- School level random assignment was faithfully executed. The evaluators note that in Year 2, there were 41 students who moved from a treatment school to a control school, and 36 students who moved from a control school to a treatment school. This corresponds to 0.6% of the student sample, and is a minimal crossover rate. The evaluators do not report any crossovers occurring in Year 3.
- 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 Chicago Striving Readers Program.
- The reading test used as an outcome measure, the Illinois Standard Achievement Test (ISAT), assesses vocabulary, reading strategies, comprehension, and literature, and was developed by the state. 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.
- Two schools (one Striving Readers school and one control school, 3.1%) were unable to participate in follow-up data collection in Year 3 (after both cohorts of schools had received two years of the intervention). Within schools, 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 equivalent on all measured and unmeasured characteristics at both one-year and two-year follow-up. This amount of attrition is within the acceptable range established by WWC standards.<sup>3</sup>
- With respect to measured characteristics, no differences in pre-study reading achievement or other demographics were noted between the students in the remaining 31 treatment and 31 control schools included in the analysis at follow-up.<sup>4</sup>
- 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.

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<sup>3</sup> For more information, please see Appendix A-Assessing Attrition Bias, of the WWC Procedures and Standards Handbook, available at: <http://ies.ed.gov/ncee/wwc/help/idocviewer/Doc.aspx?docId=19&tocId=7>.

<sup>4</sup> To date, the evaluation team has been unable to collect data from the two schools that refused participation. Future reports will be strengthened by the inclusion of data from these schools. The evaluation team will continue to assess the feasibility of collecting reading achievement data from these schools for inclusion in future analyses.

## Weaknesses

- The impacts of the targeted intervention for struggling readers cannot be estimated independently from the whole school intervention for all readers; all students in the treatment schools, including those in the targeted intervention, receive the whole school intervention.

## Whole School Intervention

**Fidelity of Implementation of the Whole School Intervention Model:** Fidelity of implementation of the *professional development model* was not calculated for Year 1. In Year 2, 3% of schools had teachers with high levels of participation in the professional development model, and 71% of schools had teachers with a medium level of participation. In Year 3, there were no schools in which teachers participated in the professional development model at a high level; teachers in 45% of schools participated at a medium level.

Fidelity of the implementation of the *classroom model* was not calculated for Year 1. In Year 2, the classroom instruction model for the Tier 2 and Tier 3 students was implemented at a high level of fidelity in 10% of schools. Ninety percent of the schools implemented the classroom model at a medium level of fidelity. In Year 3, the classroom model was implemented at a high level of fidelity in 13% of schools, and at a medium level of fidelity at 87% of schools.

**Impact of the Whole School Intervention on Student Reading Outcomes:** There were no statistically significant impacts of the whole school intervention on student reading outcomes after one or two years of the intervention. The non-significant impacts were .01 and .07 respectively.

## Summary of the Strengths and Weaknesses of the Impact Evaluation of the Whole School Intervention:

### Strengths

- *Comparison Group.* Randomization was used to construct a control group of schools. Randomization ensures that the control schools are similar to the Striving Readers schools on both observed and unobserved characteristics prior to the implementation of the intervention.
- *Presence of Confounding Factors.* 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 Chicago's Striving Readers Whole School Intervention.
- *Outcome measure.* The reading test used as an outcome measure, the Illinois Standard Achievement Test (ISAT), assesses vocabulary, reading strategies, comprehension, and literature, and was developed by the state. There is no reason to believe that students in schools assigned to the treatment group have more experience taking the test than do the

students in schools assigned to the control group, or that the test measures skills specific to the intervention, both of which could undermine confidence in the impact estimates.

- *Attrition.* Two schools (one Striving Readers school and one control school) were unable to participate in follow-up data collection in Year 3. Within schools, 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 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 students in the remaining 31 treatment and 31 control schools included in the analysis at follow-up.<sup>5</sup>
- *Analysis.* 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**

- *Limitation.* The impact of the whole school intervention for struggling readers cannot be estimated independently from the targeted intervention because some students in the treatment schools also receive the targeted intervention.

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<sup>5</sup> To date, the evaluation team has been unable to collect data from the two schools that refused participation. Future reports will be strengthened by the inclusion of data from these schools. The evaluation team will continue to assess the feasibility of collecting reading achievement data from these schools for inclusion in future analyses.