

Evidence of Effectiveness of TargetTeach® in Tulsa Public Schools

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Table of Contents

| | |
|-----------------------------------|----|
| Abstract | 2 |
| Purpose | 2 |
| Objectives | 3 |
| Methodology | |
| Data Sources | 3 |
| Participants & Measures | 4 |
| Results | |
| Mathematics | 5 |
| By Subgroup | 9 |
| Reading | 11 |
| By Subgroup | 15 |
| Conclusions | 17 |

Abstract

An evaluation of the effectiveness of TargetTeach® on 5th and 8th grade student reading and mathematics performance levels was conducted for the Tulsa Public School District in Oklahoma. The results of the evaluation indicated that passing rates in both reading and mathematics positively increased for students enrolled in TargetTeach® classrooms from 2005 to 2008. In addition, further analysis by ethnic subgroup population showed a closing of the achievement gap over time for many ethnic groups.

Evaluation Study / Purpose

TargetTeach®, the educational model developed by Evans Newton Incorporated (ENI), is based on the latest educational research on curriculum alignment, formative assessment, and professional development with coaching. TargetTeach® is founded on the logic that a student's achievement level is greatly affected by the alignment of standards, instruction, and assessment. By tightening the alignment between what is expected, what is taught, what is tested, and providing structure to the instructional process around this goal, TargetTeach® is designed to increase the probability that students will be provided the chance to learn the material and skills for which they and their schools will be held accountable.

If properly implemented, with the support of professional development and coaching, the TargetTeach® program will produce improvement in student achievement. The five steps of TargetTeach® include the following:

- 1. Identify Instructional Goals:** Evans Newton works with the district to define goals, such as raising student achievement, developing focused instruction, monitoring achievement, and reducing teachers' recordkeeping time.
- 2. Align Curriculum:** Evans Newton determines how well the district's teaching materials (usually a textbook) align with test objectives. This deep curriculum alignment culminates in the creation of two invaluable teaching tools: the Administrative Summary Report detailing the alignment results and the Aligned Teaching Unit Planner, which guides teacher instruction.
- 3. Fill the Gaps:** The Inservice department at Evans Newton assists district administrators and teachers in refocusing their curriculum and identifying or developing instruction to meet test objectives that currently have no instructional resources.
- 4. Benchmark Assessments:** Developing benchmark timelines and using incremental testing throughout the school year helps to ensure that all critical objectives are taught. Evans Newton creates these tests for teacher use.
- 5. Monitor Student Progress:** TargetTeach® Instructional Management Software helps districts implement and manage the instructional process. It streamlines instructional management by providing teachers and administrators with a wide variety of reports that simplify access to critical information about skill mastery and student performance.

The primary objective of the TargetTeach® program is to improve student achievement in specific content areas. ENI's formative assessments mirror state high-stakes tests in content, format, and level of performance so that students also become more comfortable in taking state tests. ENI's alignment and assessment tools are supported by proven professional development and coaching to ensure fidelity of implementation to achieve desired student outcomes. Formative assessments, as applied in the TargetTeach® model, provide periodic measurement of standards covered during a set timeframe within the school year, resulting in data that teachers can use to guide remedial instruction.

The following report examines the effects of TargetTeach® on mathematics and reading achievement in the Tulsa Public Schools District in Tulsa, Oklahoma. In a few selected schools during the spring of the 2004-05 school year, Tulsa began implementing TargetTeach® materials aimed at improving student achievement on Oklahoma's high stakes tests, the Oklahoma Core Curriculum Tests (OCCT). In the following year, 2005-2006, the program was implemented across the entire district. Results of TargetTeach® are focused on the student outcomes of the OCCT for grades 5 and 8 in mathematics and reading during the term of this study, from 2003-04 (the baseline year) through 2007-08.

Evaluation Study Objectives

The primary objective of the TargetTeach® program is to improve student achievement in specific content areas. The current evaluation addresses student achievement in both reading and mathematics. To this end, three research questions were investigated:

1. Is there an increase in mathematics achievement scores for students in schools implementing TargetTeach®, compared to their scores before implementation?
2. Is there an increase in reading achievement scores for students in schools implementing TargetTeach®, compared to their scores before implementation?
3. Is there an increase in reading and mathematics achievement scores over time for students of all racial/ethnic groups in schools implementing TargetTeach®, compared to their scores before implementation?

Methods

Data Source

In order to evaluate the effectiveness of the TargetTeach® program, 5th and 8th grade OCCT mathematics and reading student achievement performance levels are examined. Academic performance is examined as the percent of students performance levels dichotomized as either Passing or Not Passing (detailed below). Data were retrieved for academic years: 2003 – 04 (baseline or pre-implementation year), 2004 – 05, 2005 – 06, 2006 – 07, and 2007 – 08.

The Oklahoma Core Curriculum Tests (OCCT), a criterion-referenced testing program, compares a student's performance with performance standards established by the State Board of Education. These standards, referred to as the Oklahoma Performance Index, or OPI, identify specific levels

of performance required on each test. Students in Grade 5 and 8 take multiple-choice tests in mathematics, reading, and other content areas.

Student performance on the OCCT is classified into four performance levels (Advanced, Satisfactory, Limited Knowledge, and Unsatisfactory). The levels are:

1. Advanced: Students consistently demonstrate a thorough understanding of the knowledge and skills expected of all students at this grade level
2. Satisfactory: Students demonstrate a general understanding of the knowledge and skills expected at this grade level.
3. Limited Knowledge: Students demonstrate a partial understanding of the knowledge and skills expected at this grade level.
4. Unsatisfactory: Students do not demonstrate at least a Limited Knowledge level of the knowledge and skills expected at this grade level.

Students are required to score an achievement rating of Satisfactory or Advanced on the content area tests to be considered proficient. In addition to overall student learning, *NCLB* specifically requires states to improve learning of designated subgroups in the student population. The desired effect of increased accountability is a closing of the achievement gap frequently found between ethnic and gender sub-populations. To examine the ability of TargetTeach to address these performance gaps we analyzed the mathematics and reading performance of students conditioned on ethnicity.

Participants & Measures

The participants were the District's 5th and 8th grade students between the years 2004 through 2008. The average number of total participants was 2,700 students in grade 5 and 2,500 students in grade 8.

Analyses focused on proficiency level performance differences using two subgroups; namely, those passing or not passing. These levels were determined using the state guidelines for cut scores for the four achievement levels: Advanced (A), Satisfactory (S), Limited Knowledge (L), and Unsatisfactory (U). From these achievement levels, the performance data was dichotomized into the two subgroups in the following manner: below standard proficiency or not passing (L and U) and at or above standard proficiency or passing (A and S).

To examine differences in student performance across school years, variables included year and performance level. These performance levels were determined using the state guidelines for cut scores. The study evaluated the difference between the years to see whether implementation of TargetTeach® impacted student performance. The variable of ethnicity was also used to analyze group differences in performance.

The analysis was conducted using a multi-year, cross sectional design. The analysis compares scores from the different students enrolled in the 5th grade or the 8th grade during the years of study. Chi-square tests were conducted to investigate performance differences overall and among one subgroup using the proficiency variable as outcome variable.

Based on reports from school administrators and TargetTeach® representatives, the TargetTeach® program was initially implemented in 25 schools during Spring of 2005 then implemented in to all schools during the 2005-2006 school year. The first set of schools selected for implementation were considered those most at risk of failing the No Child Left Behind measure of Adequate Yearly Progress. In the analysis, the first, smaller set of schools is called the pilot panel while the second set is called the full panel. Data from the pilot group of schools are included in the full panel charts.

Results

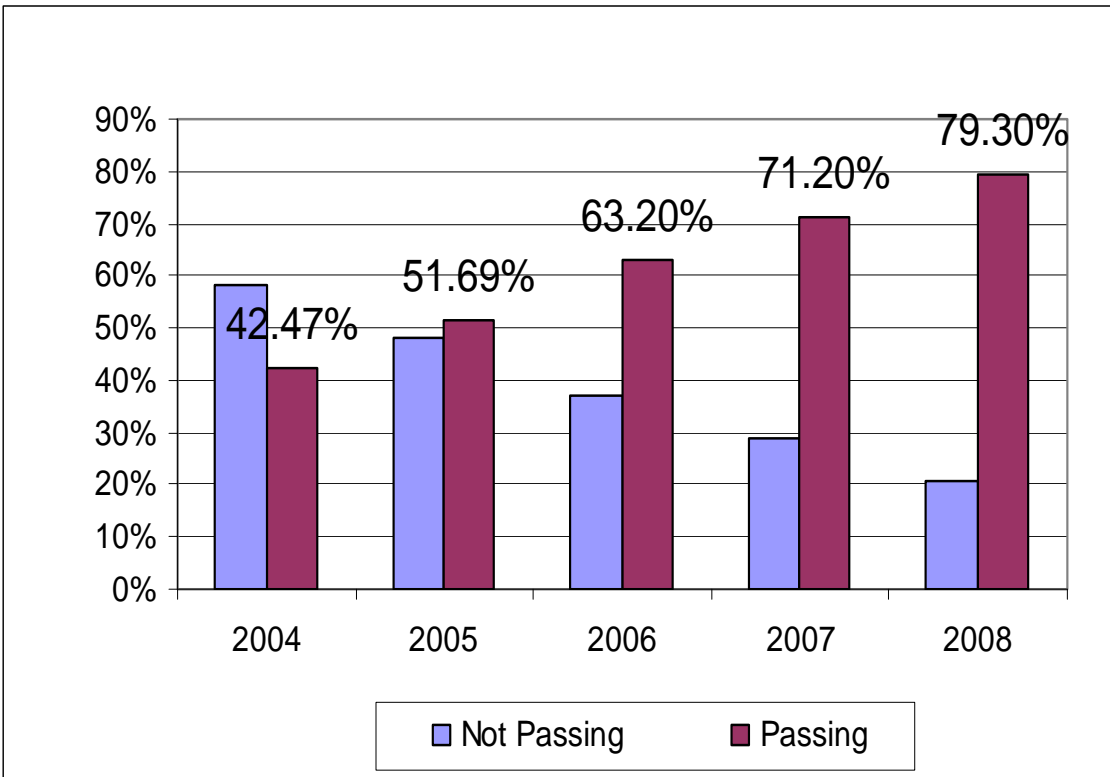
Mathematics

Student data are arranged to show the percentages of students who are passing (at/above proficiency) or not passing (below proficiency) in mathematics on the OCCT.

In the pilot panel, for 5th grade mathematics, as illustrated below, student achievement increased each year from a 42% passing rate in 2005-- the year that began with a spring implementation, to a 79% passing rate after four years of full implementation.

In the pilot panel or preliminary group of schools implemented the TargetTeach® program during the Spring of 2005. In the prior year, 2004, 42.47% of 5th graders were passing the OCCT after the spring implementation. After the first spring implementation of TargetTeach® implementation (2005), 51.6% of the pilot schools' students performed at or above the state's standard. In 2006, after the first full year of implementation, that rate increased to 63.2% of students passing. In the third year of implementation, the percentage of students passing the state standards climbed again to 71.2% of students passing. By the last year of this study's data, the rate of passing was 79.3%. So, within three years of fully implementing TargetTeach®, the percentage of students who improved their mathematics scores to the level of at or above the state's standard increased by nearly 37%.

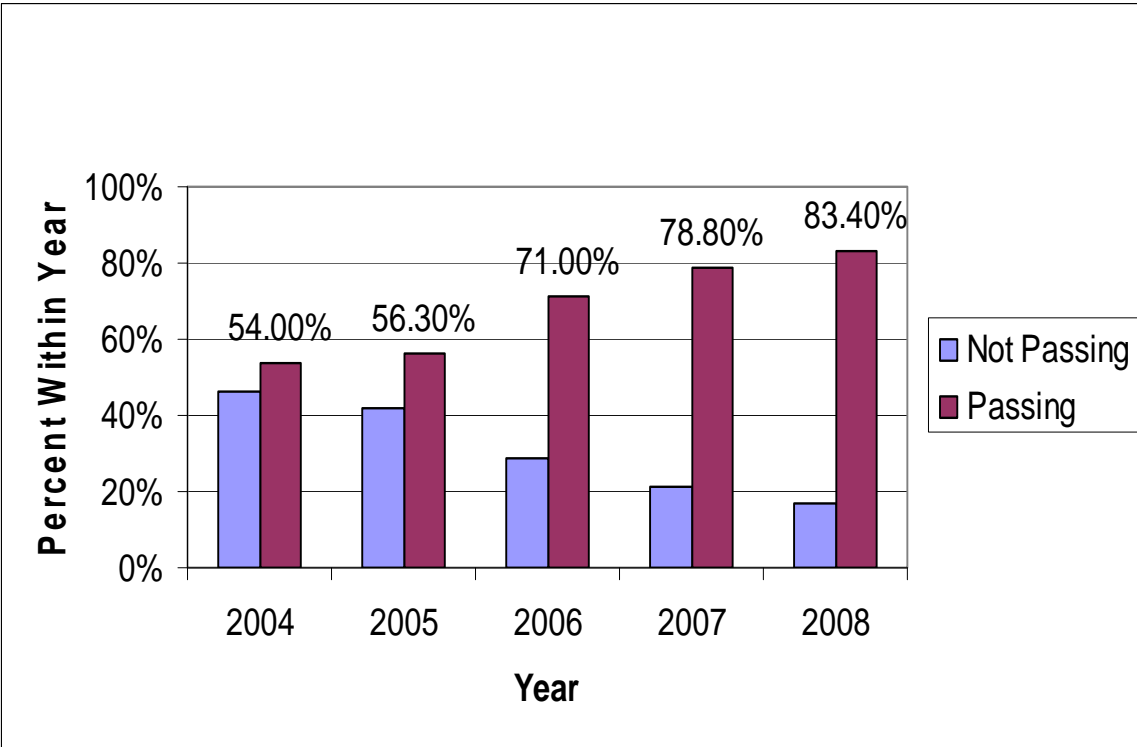
5th Grade Mathematics Performance Levels, Pilot Schools



The next chart provides the rate of passing in all Tulsa schools once the additional schools began implementation during the 2005-2006 school year. In the full panel of schools, the 2005-06 year was the first year of post-implementation data. As illustrated below, student achievement increased each year from a 54% passing rate in the baseline year, before TargetTeach[®] implementation, to an 83% passing rate after three years of implementation.

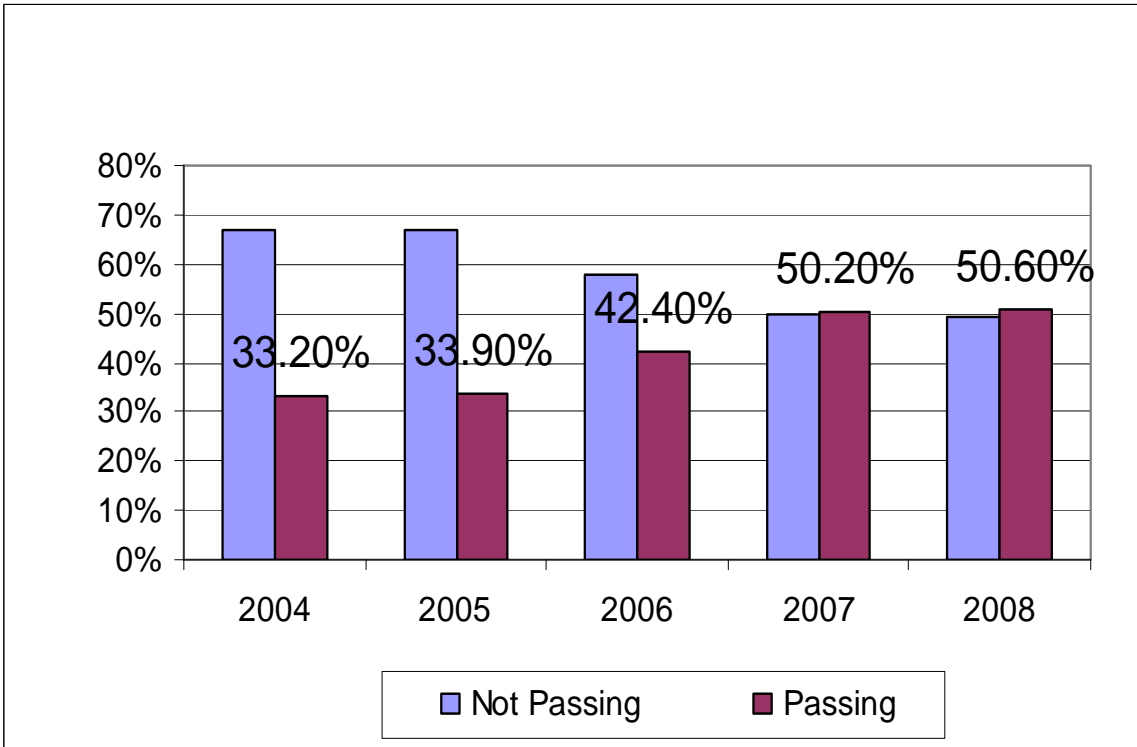
During the 2004-2005 school year, TargetTeach[®] began in the spring with a very limited number of participating schools. The district rate of passing 5th grade mathematics was 56.3%. This rate was a slight improvement from the baseline rate passing rate of 54%. In 2006, after the first year of full implementation for all schools, that rate increased to 71% of students. In the second full year of implementation, the percentage of students at or above proficiency climbed to 78.8% of students passing. By the last year of this study's data, the rate of passing was 83.4%. Over the three years of implementing TargetTeach[®], the percentage of 5th grade students who improved their mathematics scores to the level of at or above the state's standard increased by 29%. This difference is graphically represented in the chart below.

5th Grade Mathematics Performance Levels, Full Panel Schools



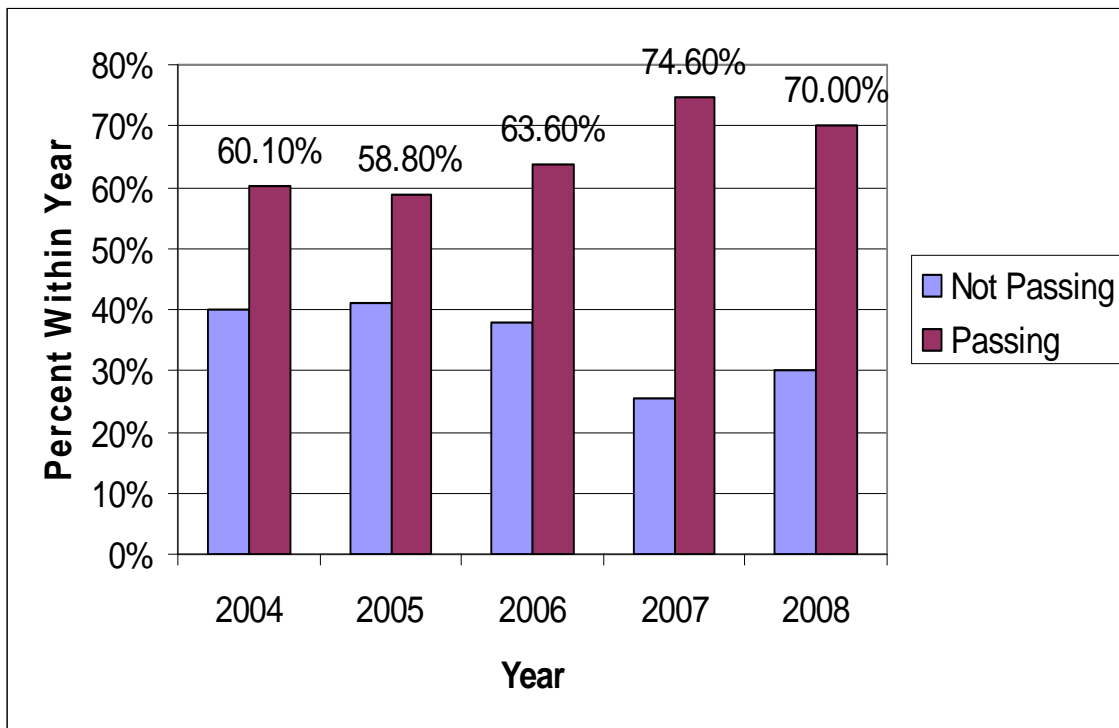
For 8th grade students, in the pilot panel or preliminary group of schools implementing the TargetTeach® program during the Spring of 2005, 33.9% of 8th graders were passing the OCCT. This was virtually the same level of performance as the baseline or pre-implementation rate of passing (33.2%). In the next year, which was the first full year of TargetTeach® implementation (2006), the rate of passing increased to 42.4% and again the following year, so that 50.2% of the pilot schools' students were passing mathematics. In the last year of study data, that rate increased slightly to 50.6% of students. The overall percentage increase of students passing 8th grade math was positive but not as high as for the 5th grade students over the same time frame (17.4% as compared to 37%).

8th Grade Mathematics Performance Levels, Pilot Schools



In the full panel of schools implementing Target Teach both the 2003-2004 and the 2004-2005 contain primarily baseline data. In the first year 60% of students were passing which then decreased to 58.8% of 8th graders passing the OCCT. After the first year of full implementation, in 2006 the passing rate for 8th graders in mathematics increased to 63.6%. In the second year of implementation, the percentage of students increased again to 74.6% of students passing. By the last year of this study's data, the rate of passing was 70%. Over the three years of TargetTeach[®] implementation, the percentage of 8th grade students who improved their mathematics scores to the level of at or above the state's standard increased by 10%.

8th Grade Mathematics Performance Levels, Full Panel Schools



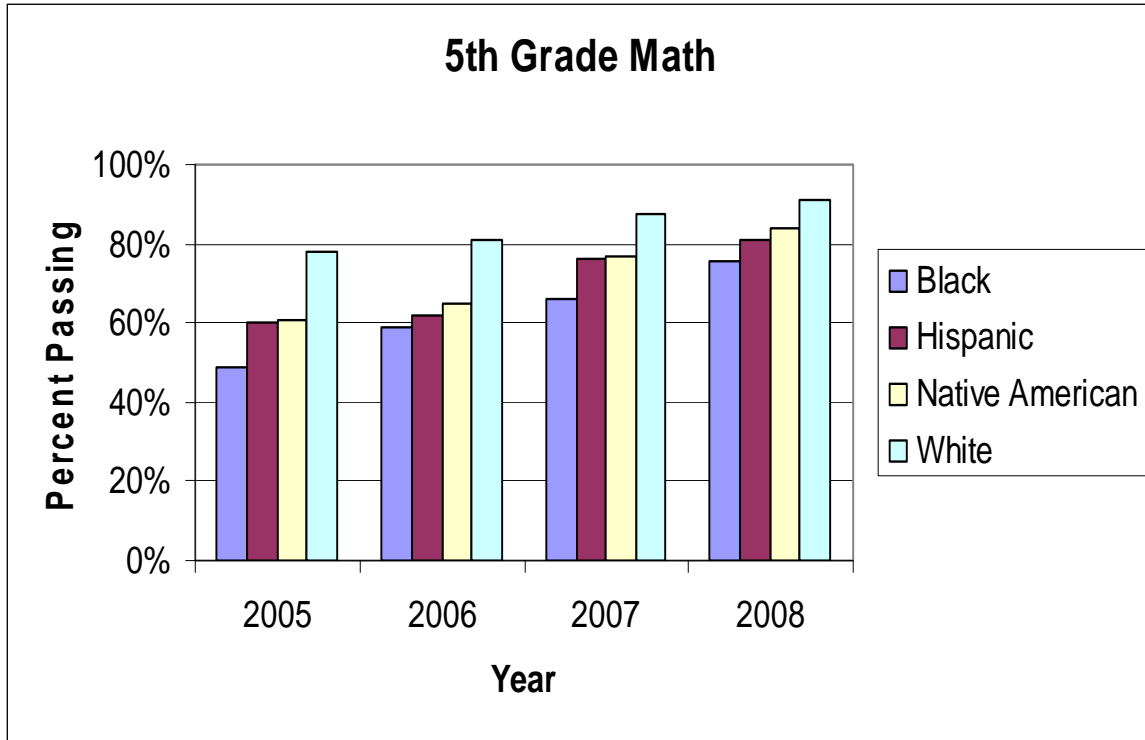
Overall in mathematics, 5th grade student performance levels exhibited a trend of steady increases in passing rates over time since the implementation of TargetTeach[®]. The 8th grade rate of passing in mathematics had a flat effect or some minor fluctuations in a few years but, again, overall results show a general, positive increase in the percentage of students passing the mathematics test when the first year data is compared to the last (2007-2008) school year data.

Subgroup Achievement

In order to examine the effect of TargetTeach[®] on specific subgroups of the student population, scores were disaggregated by ethnicity for further examination. One reason for disaggregating achievement data by subgroup performance is to examine the achievement gap. This questions how, relative to the white population, other subgroups within the district perform.

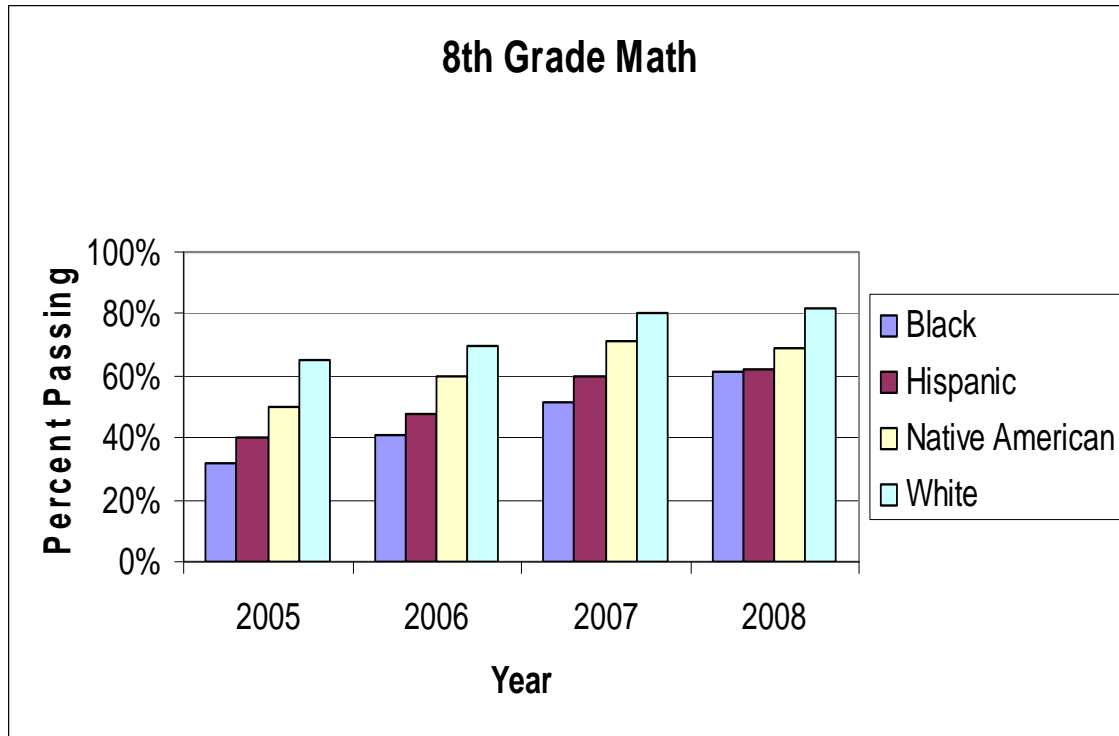
In 5th grade math, in the baseline year, the achievement or passing rates for Black students is lower by about 30% in the pre-implementation year and in the final post implementation year, that decreased to 16%. Also, Hispanic students went from an 18% difference to a 10% difference. For Native American students, the difference in their baseline year rate of passing to White students was 17% and it decreased to a 7% difference by the last year of post-implementation data for this study (2007-2008).

5th Grade Mathematics Performance Levels By Ethnicity



In 8th grade math, in the baseline year, the achievement or passing rates for Black students is lower by about 33% in the pre-implementation year and in the final post implementation year, that decreased to 21%. Also, Hispanic students went from an 25% difference to a 20% difference. For Native American students, the difference in their baseline year rate of passing to White students was 15% and it decreased to a 12.6% difference by the last year of post-implementation data for this study (2007-2008).

8th Grade Mathematics Performance Levels By Ethnicity



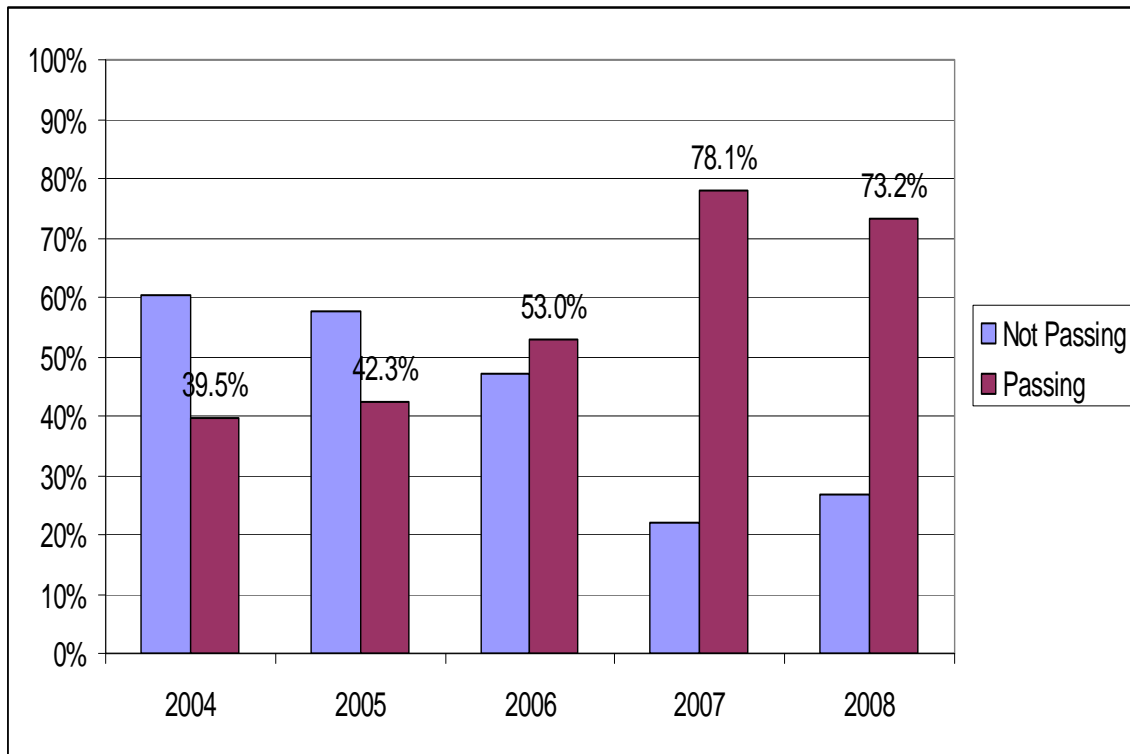
Reading

Student data are arranged to show the percentages of students who are passing (at/above proficiency) or not passing (below proficiency) in reading on the OCCT.

In the pilot panel, for 5th grade reading, as illustrated below, student achievement increased each year from a 39.5% passing rate in 2004-- the baseline year -- to a 73.2% passing rate after three years of full implementation.

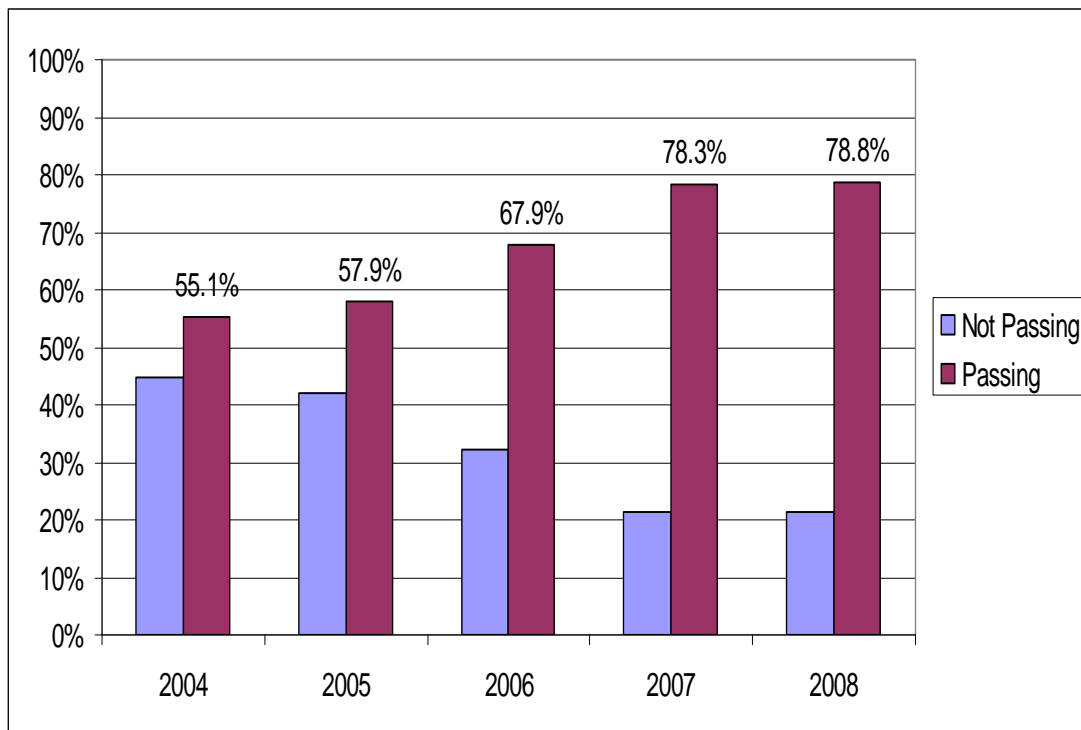
In the pilot panel or preliminary group of schools implementing the TargetTeach® program, 42.3% of 5th graders were passing the OCCT after the spring implementation (2005) as compared to the baseline rate of 39.5%. After the first full year of TargetTeach® implementation (2006), 53% of the pilot schools' students performed at or above the state's standard. In 2007, that rate increased to 78.1% of students passing. By the last year of this study's data, the rate of passing slightly declined from the previous year to 73.2%. So, within three and one-half years of fully implementing TargetTeach®, the percentage of students who improved their mathematics scores to the level of at or above the state's standard increased by nearly 34%.

5th Grade Reading Performance Levels, Pilot Schools



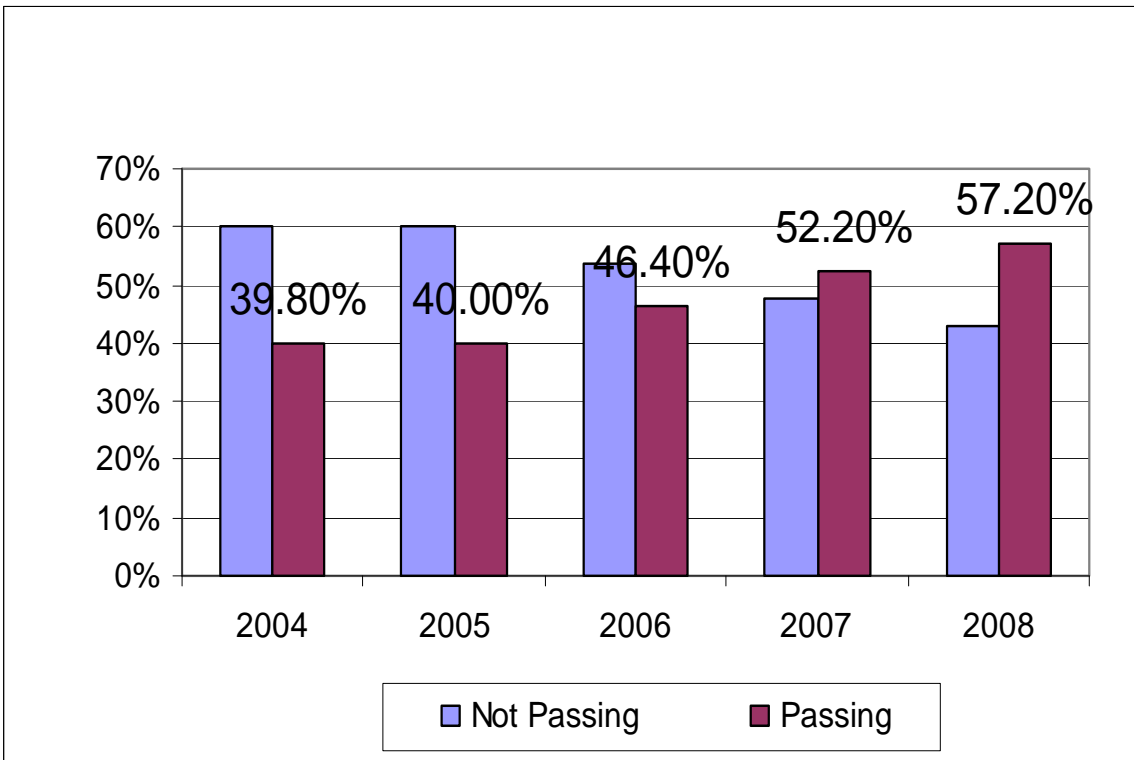
In the full panel of schools implementing Target Teach after the 2005-2006 school year, 68% of 5th graders were passing the OCCT after the first year of implementation compared to the baseline rates of 55% in 2004 and 58% in 2005. In 2007 that rate increased to 78.3% of students. By the last year of this study's data, the rate of passing was 78.8%. Over the three years of implementing TargetTeach®, the percentage of students who improved their reading scores to the level of at or above the state's standard increased by nearly 24%.

5th Grade Reading Performance Levels, Full Panel Schools



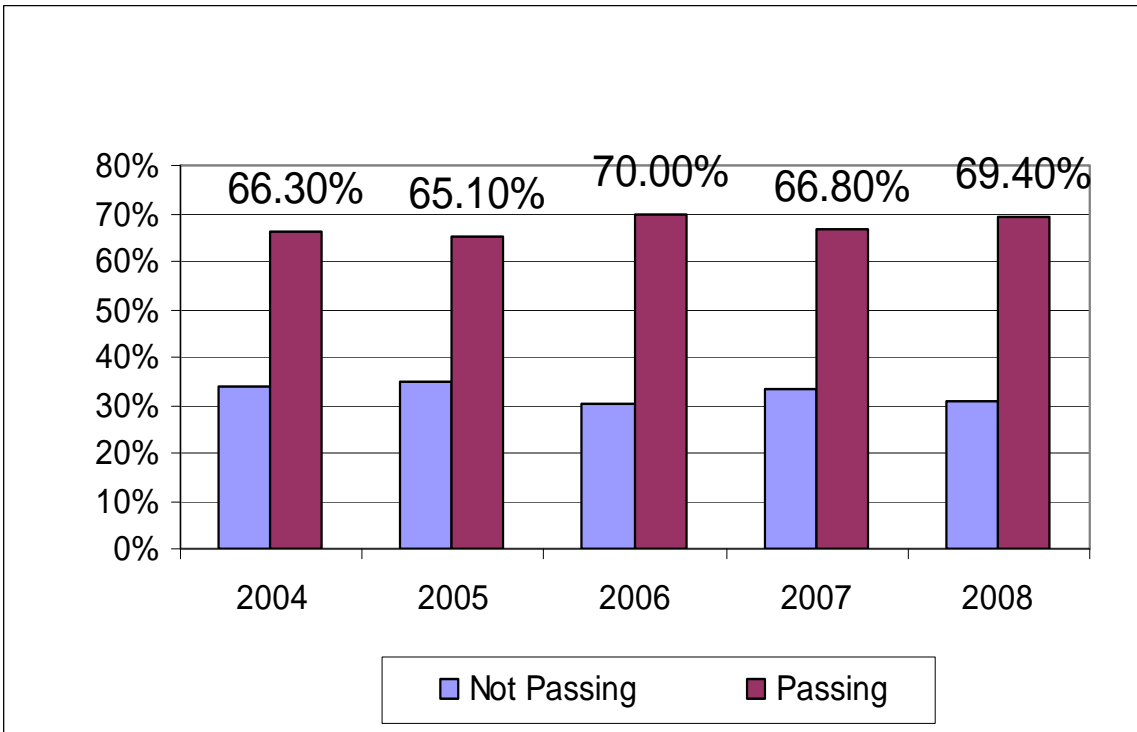
For 8th grade students in the pilot panel, their 2004 data (pre-implementation) showed that 39.8% of students were passing. After the first, partial year of TargetTeach[®] implementation (2005), 40% of the pilot schools' students were then passing the state's standard. In 2006, the first full year of implementation, that rate increased to 46.4% of students. In the next year of implementation, the percentage of students at or above proficiency climbed again to 52.2% of students passing. By the last year of this study's data, the rate of passing was 57.2%. So, within three and one-half years of implementing TargetTeach[®], the percentage of students who improved their reading scores to the level of at or above the state's standard increased by over 17%. Please see the chart on the next page.

8th Grade Reading Performance Levels, Pilot Schools



In the full panel of schools implementing Target Teach during the 2005-2006 school year, 70% of 8th graders were passing the OCCT after the first year of implementation. In 2007 that rate decreased to 66.8% of students. By the last year of this study's data, the rate of passing was 69.4%—an overall increase of 3%.

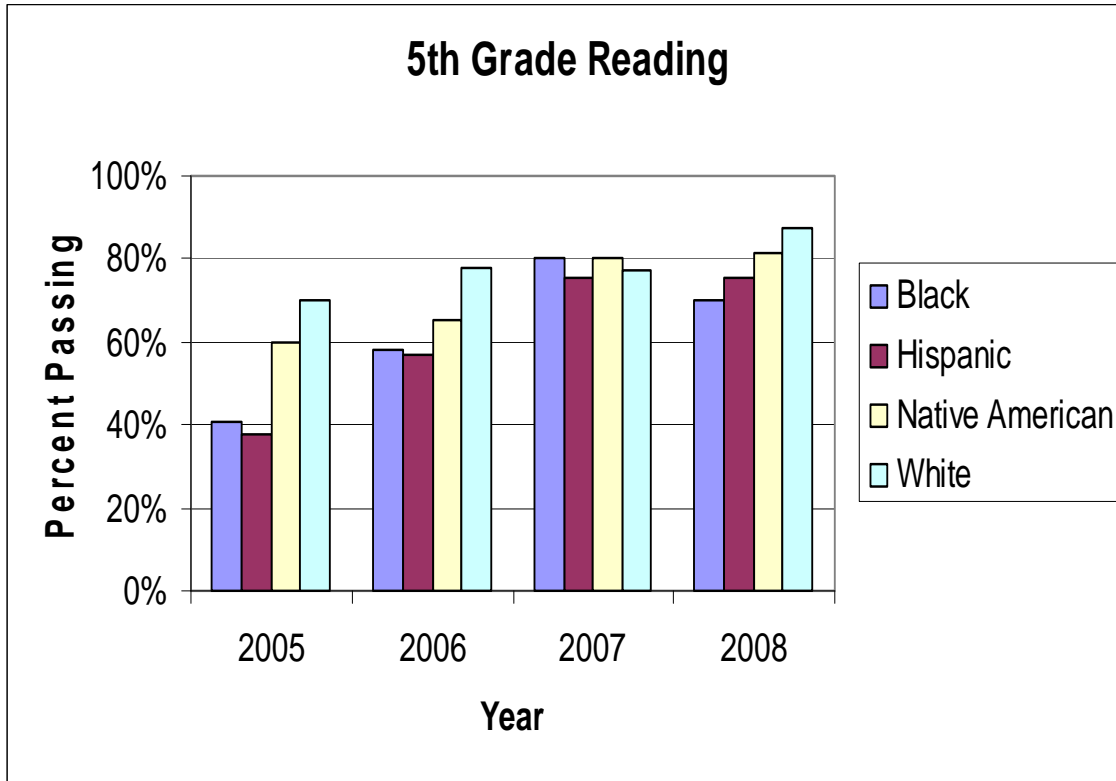
8th Grade Reading Performance Levels, Full Panel Schools



Subgroup Achievement

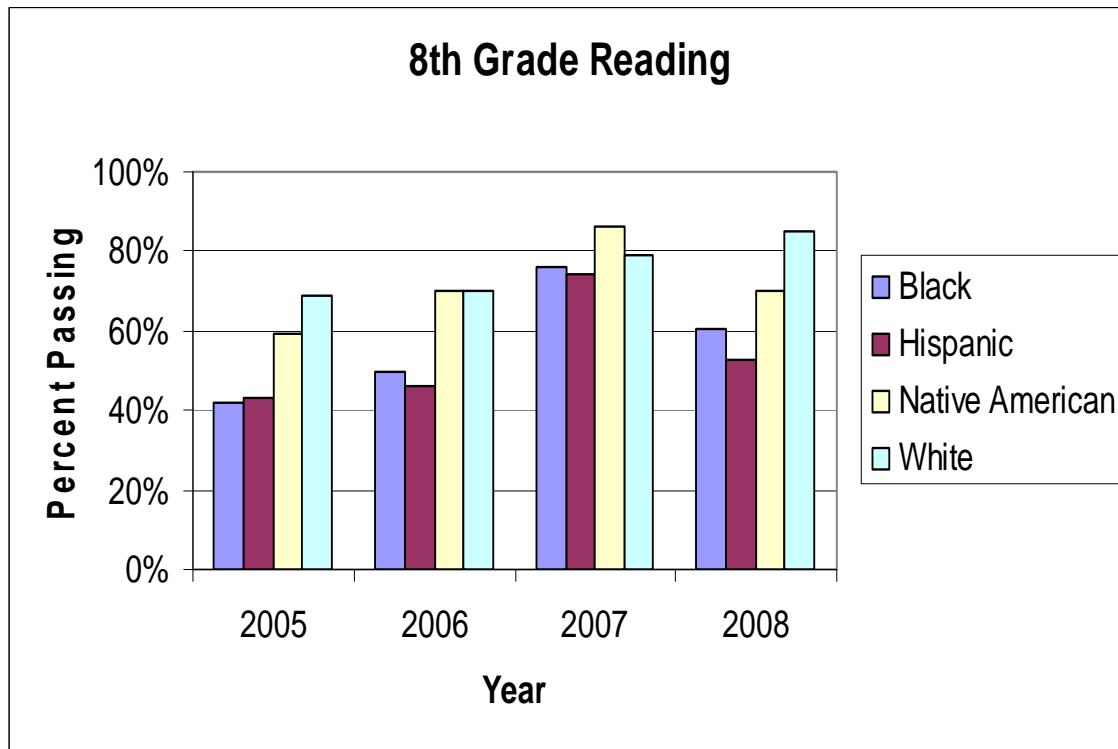
Again, in order to examine the effect of TargetTeach[®] on specific subgroups of the student population, scores were disaggregated by ethnicity for further examination. In 5th grade reading, in the baseline year, the achievement or passing rates for Black students is lower by 29% in the pre-implementation year and in the final post implementation year, that decreased to 17%. Hispanic students went from a 32% difference to a 12% difference in rates of passing as compared to White students. For Native American students, the difference in their baseline year rate of passing to White students was 10% and it decreased to a 6% difference by the 2007-2008 year.

5th Grade Reading Performance Levels By Ethnicity



In 8th grade reading, in the baseline year, the achievement or passing rates for Black students is lower by 27% in the pre-implementation year and in the post implementation year that rate decreased to 24%. Also, Hispanic students started at a 26% difference in the rate of passing and ended with an increase to 32% difference. Native American students also experienced an increase in the differential rate of passing. The first year's 10% difference in passing rates, increased to a 14% difference by the last year (07-08). In 2007, the racial/ethnic achievement gaps were closed; in fact, both Black and Native American students rate of passing surpassed White students by 4%. However, a gap in performance returned for the 2008 cohort.

8th Grade Mathematics Performance Levels By Ethnicity



Conclusions

The use of the TargetTeach® program is designed to produce improvement in student achievement. The process relies on curriculum alignment, assessment, and professional development with coaching. This evaluation of the effectiveness of TargetTeach® on 5th and 8th grade student reading and mathematics performance levels conducted for the Tulsa Public School District shows marked growth in student achievement. The impact in percentage passing rates is higher for 5th grade students than for 8th. Overall results indicate that passing rates in both reading and mathematics increased for students enrolled in TargetTeach® classrooms from 2005 to 2008. In addition, further analysis by ethnic subgroup population showed a closing of the achievement gap for 5th grade students in mathematics and reading and for 8th grade students in mathematics, but not for reading.