



# Picturing Writing: Fostering Literacy Through Art®



**Arts in Education Development and Dissemination  
(AEMDD) Research Findings 2007-2010**

# **Study Overview**

## **Manchester School District 1500 Elementary School Students**

**Conducted and analyzed by Dr. Susan Frankel  
RMC Research Corporation  
Portsmouth, NH**

- 3 Picturing Writing Schools (Treatment Schools), Grades 1-4  
(plus ELL Magnet Program Grades 1-5)
- 3 Demographically matched Comparison Schools, Grades 1-4  
(plus ELL Magnet Program Grades 1-5)
- Data collection: September 2007-October 2010

# Executive Summary

The Manchester School District (MANSD), Manchester, NH received four years of federal funding (2006-2010) through a US Department of Education Arts in Education Model Development and Dissemination (AEMDD) Grant to investigate the impact of Picturing Writing: Fostering Literacy Through Art® (PW) on students' writing, visual literacy and reading skills. Because the City of Manchester serves as a national refugee resettlement center, seventy (70) languages are spoken within the school district. The study included 1500 students, grades 1-4, and 2 ELL Magnet Programs, grades 1-5. The ELL Magnet Programs serve students new to the country who have limited English proficiency.

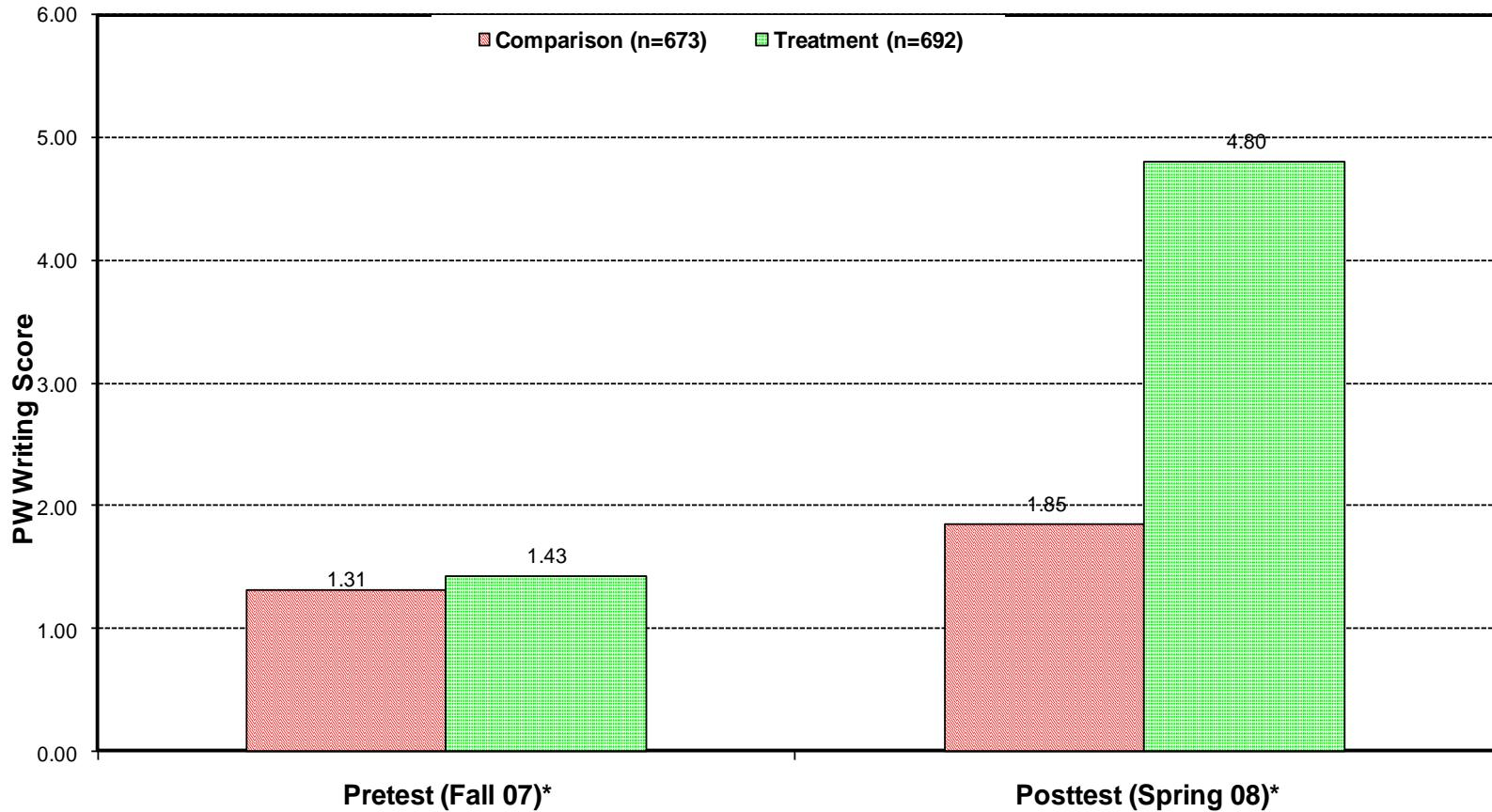
A rigorous evaluation, designed and conducted by Dr. Susan Frankel of RMC Research Corporation, began in the fall of 2007. Prior to the commencement of the evaluation, teachers in the treatment schools received 6 months of training and classroom coaching delivered by the Center for the Advancement of Art-Based Literacy, University of New Hampshire. The study utilized a quasi-experimental research design with matched comparison schools based on Free & Reduced Lunch (F&R) percentages. Art and writing samples were collected in the fall and spring of each year and were scored by independent raters using two separate PW instruments. One instrument focused on writing skills, the other on visual literacy. The writing portion of the study was a blind study. Student writing was separated from the art and typed in a uniform fashion, thus removing all identifying features. Student's name, teacher's name, and school were removed from each art and writing sample. Independent raters received 51 hours of training at RMC Research before achieving an inter-rater reliability rating of 92.5%.

The evaluation, repeated over 3 academic years (2007-2010), included both independent research as well as analysis of standardized test score data. Despite less-than-ideal circumstances (such as a significant turnover of administrators and teachers during the evaluation period), the findings were very encouraging, particularly for those students considered to be at risk--the very same students targeted by NCLB. Statistically significant gains in writing and visual literacy were achieved by the treatment group each year as measured by the PW instruments compared to the demographically matched comparison group. This trend held true for all at-risk subgroups including "Below benchmark readers," Special Education students, ELL mainstream students and ELL Magnet students.

The final statewide writing assessment (NECAP, 2010) showed a strong performance by all 3 treatment schools as compared to their demographically matched comparison schools. The highest fidelity treatment school (as a result of consistent administrative support) outperformed the 13 other elementary schools in the District despite the fact that 8 of those schools had fewer students participating in Free & Reduced Lunch. Boys in the high fidelity school scored equally as well as their female classmates and outscored boys *and* girls across the District; Title I students and economically disadvantaged students in this school outperformed their peers across the District and the State.

While PW focuses on writing instruction, on the 2010 NECAP Reading Assessment, the high fidelity treatment school with 57% F&R ranked second in the District in reading proficiency, outperformed only by the school with the most privileged student population (15% F&R). Hallsville outperformed 12 elementary schools in the District in reading, 7 of which had lower F&R percentages.

## Pretest Posttest Writing Scores, Treatment vs. Comparison Group - All Grade Levels



\*The difference between comparison and treatment groups is statistically significant.

In the first year of the research study, statistically significant gains in writing were achieved by the treatment group as compared to the demographically matched comparison group from fall to spring. While there was growth within both treatment and comparison groups, much greater gains were made among the students participating in Picturing Writing.

# Text Only Scoring Instrument

## 1. Lead sentences

Sense of setting (time of day, weather, season, place)

Hook

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## 2. Character traits or development

Describes what character is doing

Describes (shows or tells) how character is feeling

\_\_\_\_\_

\_\_\_\_\_

## 3. Story development/Plot

problem or anticipated event/drama or suspense

solution or sense of relief

resolution or sense of conclusion

sense of sequence/cohesiveness

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## 4. Descriptive language

strong adjectives

strong verbs and adverbs

sensory component

inclusion of detail (including similes, personification...)

transitional phrases

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## 5. Overall quality

Do words paint a picture in reader's mind?

Do words establish mood?

Does the piece have voice?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## 6. Overall use and quality of written information to tell the story

Additional Characteristics:

\_\_\_\_\_

1= none, 2 = minimal, traces, 3= abbreviated

4 = partially developed, 5 = fully developed, 6 = extraordinary

This scoring instrument was used to evaluate the quality of students' story writing.

# Use of Visual Information to Communicate Ideas Scoring Instrument

## 1. Color

Color accurately represents setting elements \_\_\_\_\_

Color used to enhance mood \_\_\_\_\_

## 2. Texture

Texture used to represent story elements \_\_\_\_\_

Texture used to enhance mood \_\_\_\_\_

## 3. Shape

Shape/contour used to represent setting \_\_\_\_\_

Shape attempts to accurately represent key objects \_\_\_\_\_

## 4. Detail

Details used to enhance setting \_\_\_\_\_

Details used to depict character \_\_\_\_\_

## 5. Composition

Foreground/background provide information about setting \_\_\_\_\_

Placement/size creates sense of depth \_\_\_\_\_

Placement/size used to enhance sense of importance \_\_\_\_\_

Picture composition conveys meaning of text \_\_\_\_\_

## 6. Sequence

Sequence reflects changes in time of day/weather, etc. \_\_\_\_\_

Changes in perspective enhance the story \_\_\_\_\_

Picture sequence tells the story \_\_\_\_\_

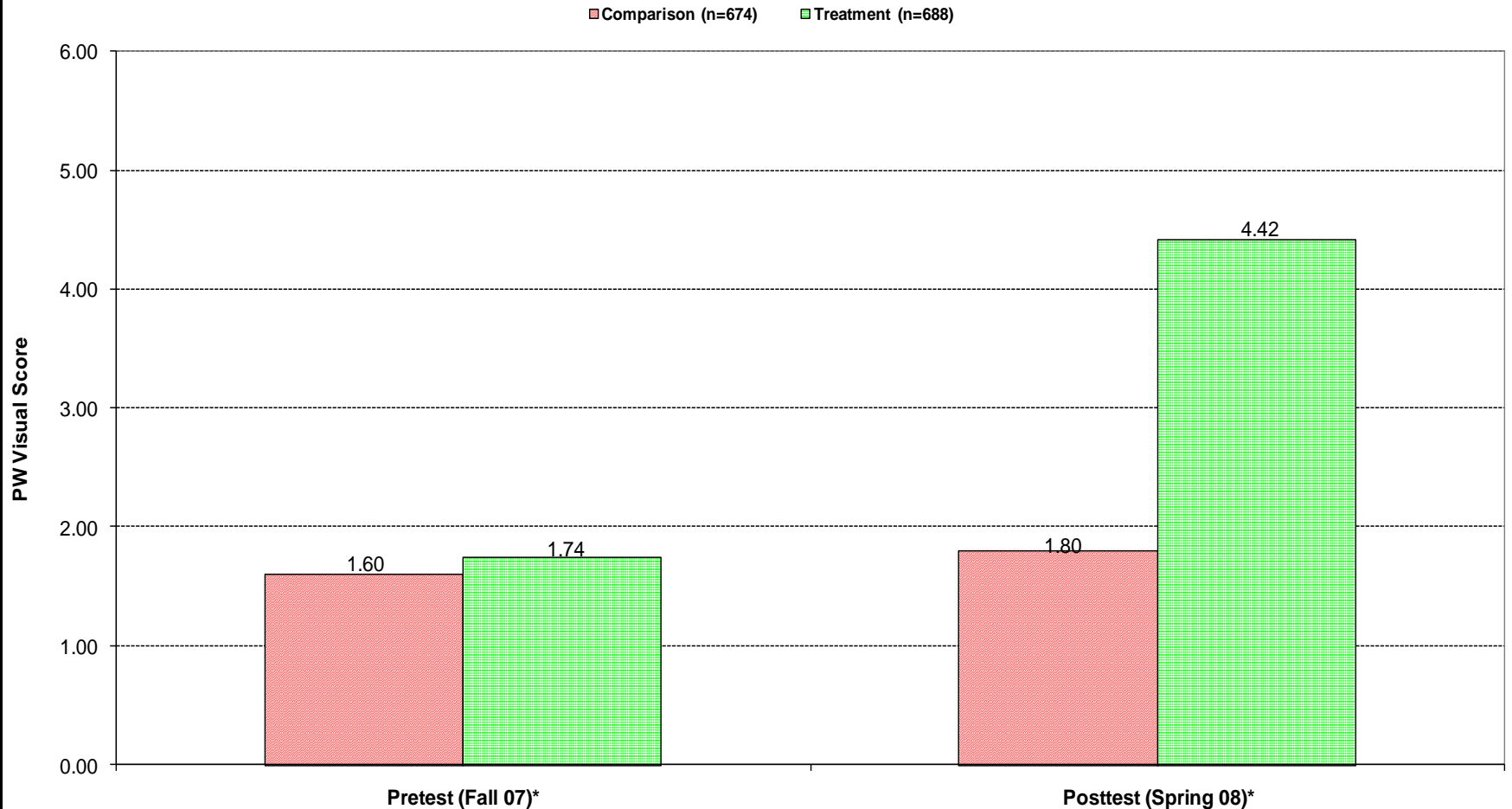
## 7. Overall use and quality of visual information to tell the story \_\_\_\_\_

1= none, 2 = minimal, traces, 3= abbreviated

4 = partially developed, 5 = fully developed, 6 = extraordinary

This visual instrument was used to evaluate students' use of visual elements to make meaning and communicate their ideas.

## Pretest Posttest Visual Literacy Scores, Treatment vs. Comparison Group All Grade Levels

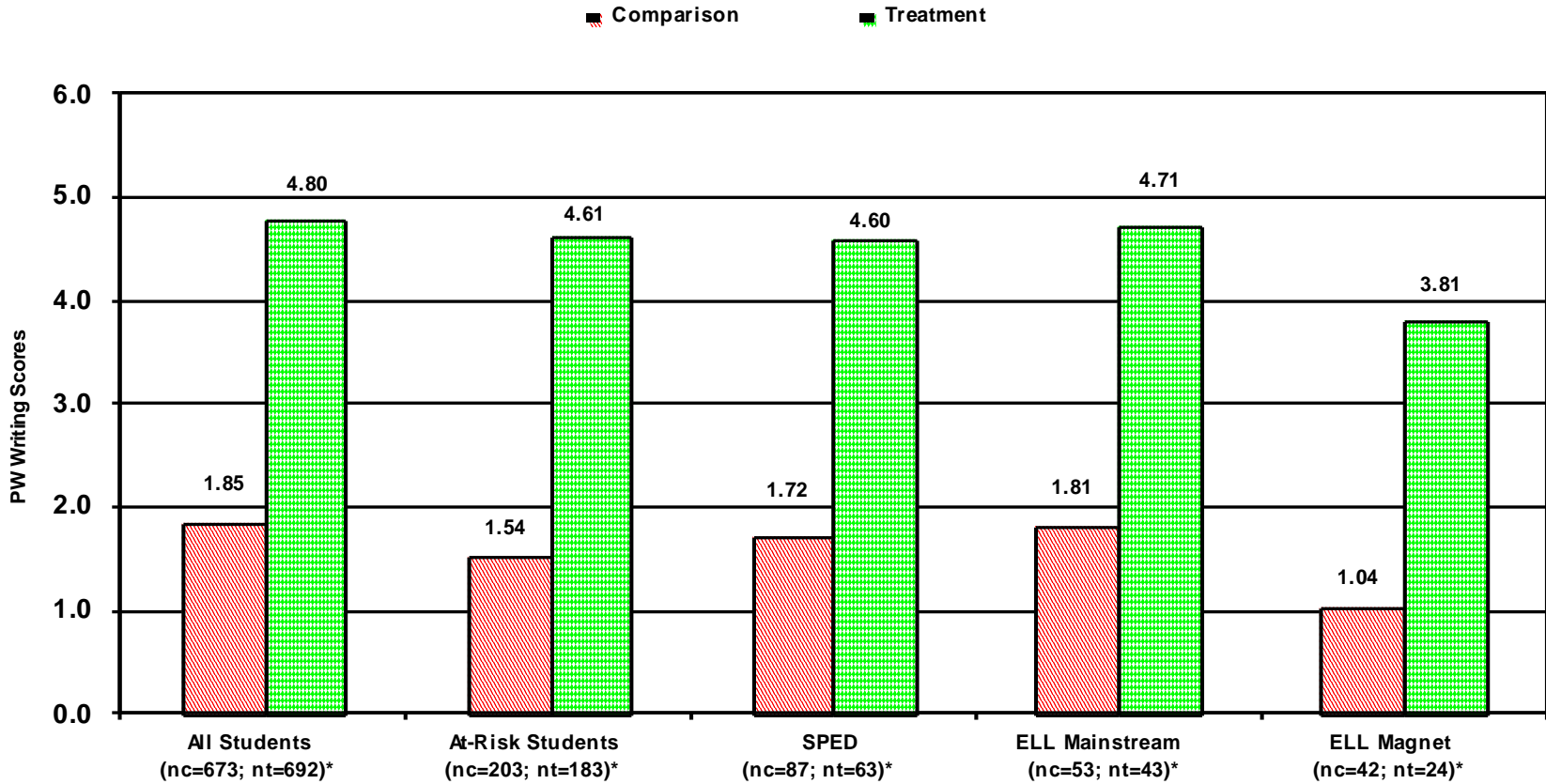


\*The difference between comparison and treatment groups is statistically significant.

Looking at students' use of visual elements to communicate their ideas, statistically significant gains were made by students participating in PW while only slight gains were made by students in the demographically matched comparison group.

# Comparative Summary of Writing Scores for Subgroups: Spring 2008

PW Spring Writing Scores, Treatment vs. Comparison  
Groups - Subgroups

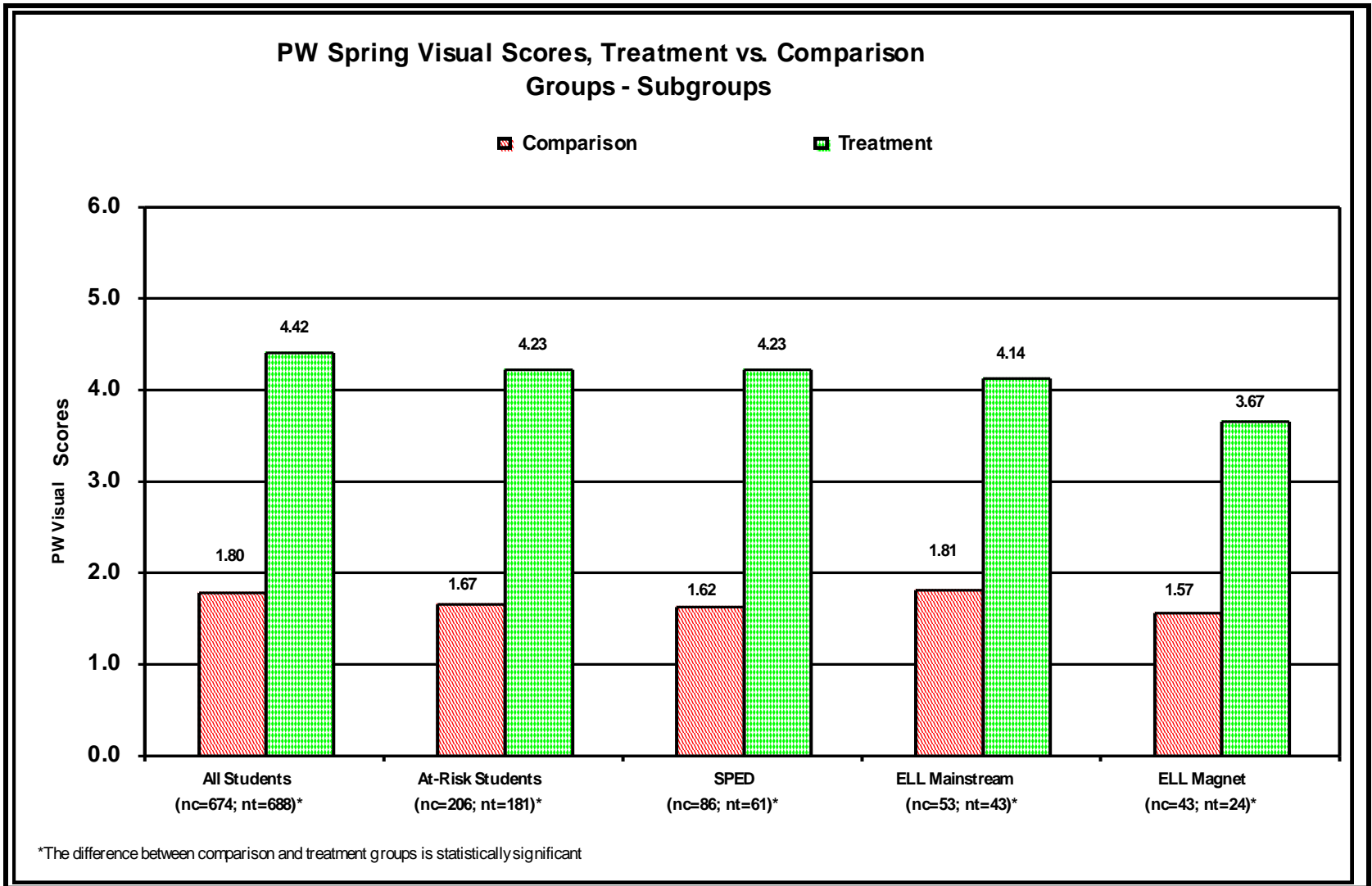


\*The difference between comparison and treatment groups is statistically significant

Following one year of implementation, the spring writing scores for students in all at-risk subgroups showed great promise. All at-risk subgroups (those students targeted by NCLB) in the treatment group not only made statistically significant gains as compared to their demographically matched comparison groups, but also kept close pace to “all students” in the treatment group. (“At-risk students” were defined as any students who scored below benchmark in reading in the fall of that year.) Even ELL Magnet students--English language learners who were new to the country and spoke limited English—scored better than “all students” in the comparison group.

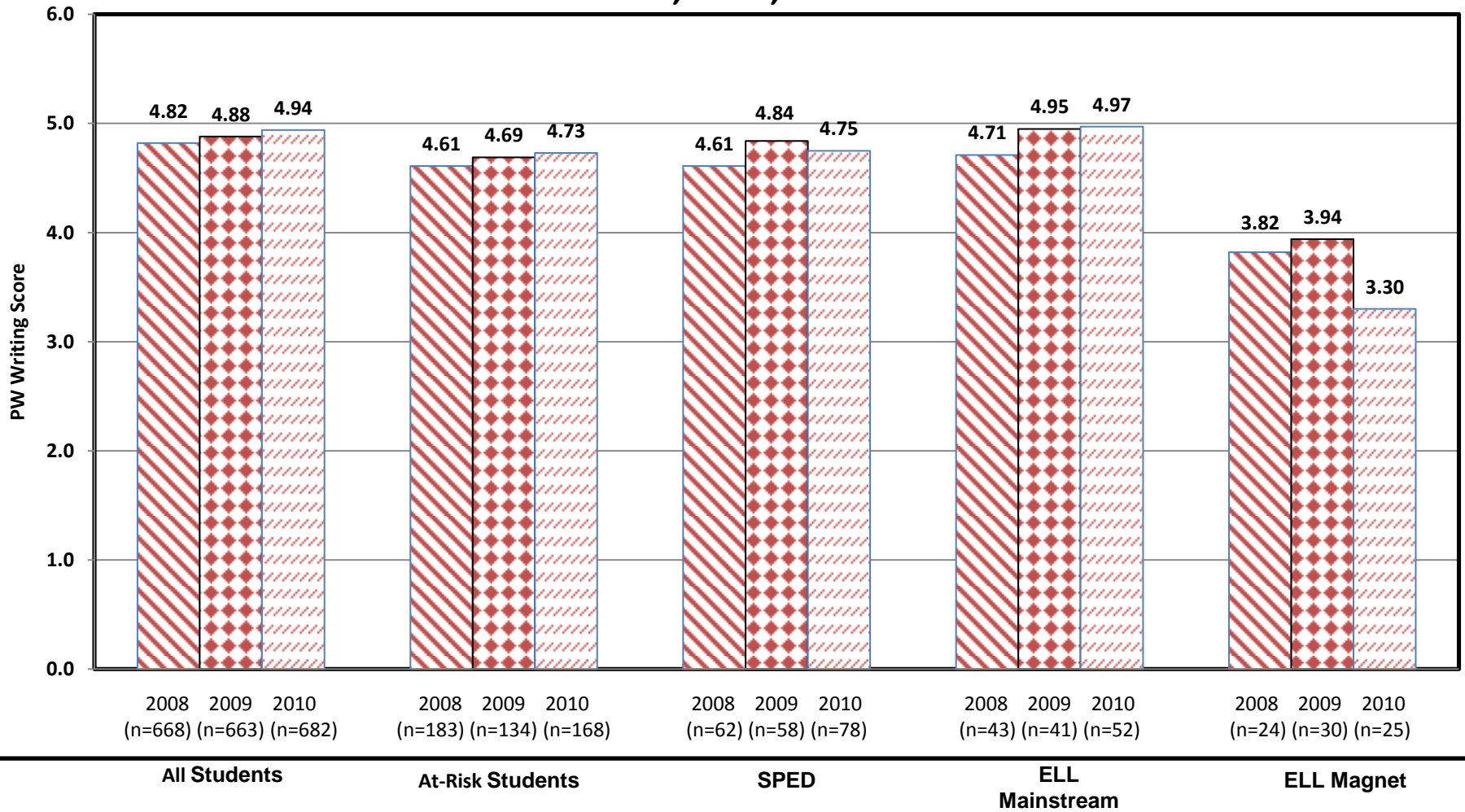
# Comparative Summary of Visual Scores for all Subgroups

## Spring 2008



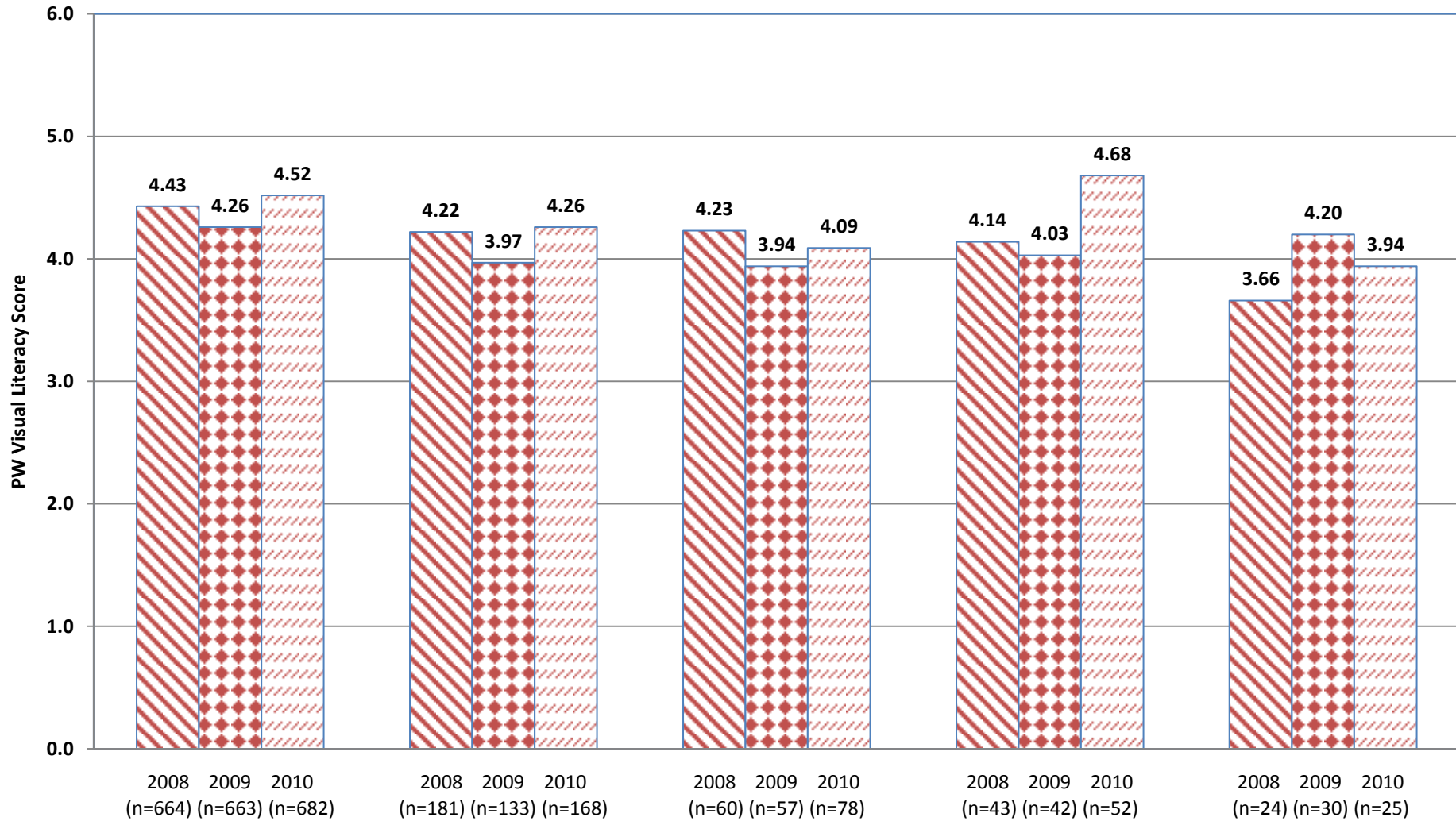
The summary of visual scores for all at-risk subgroups shows similar findings.

## PW Spring Writing Scores, Treatment Students – Subgroups 2008, 2009, 2010



The study was conducted for 3 consecutive years. Statistically significant findings were achieved in writing each year for all treatment subgroups despite greater year-to-year variations within Special Education and ELL Magnet populations.

# PW Spring Visual Literacy Scores, Treatment Students - Subgroups 2008, 2009, 2010



**All Students**

**At-Risk Students**

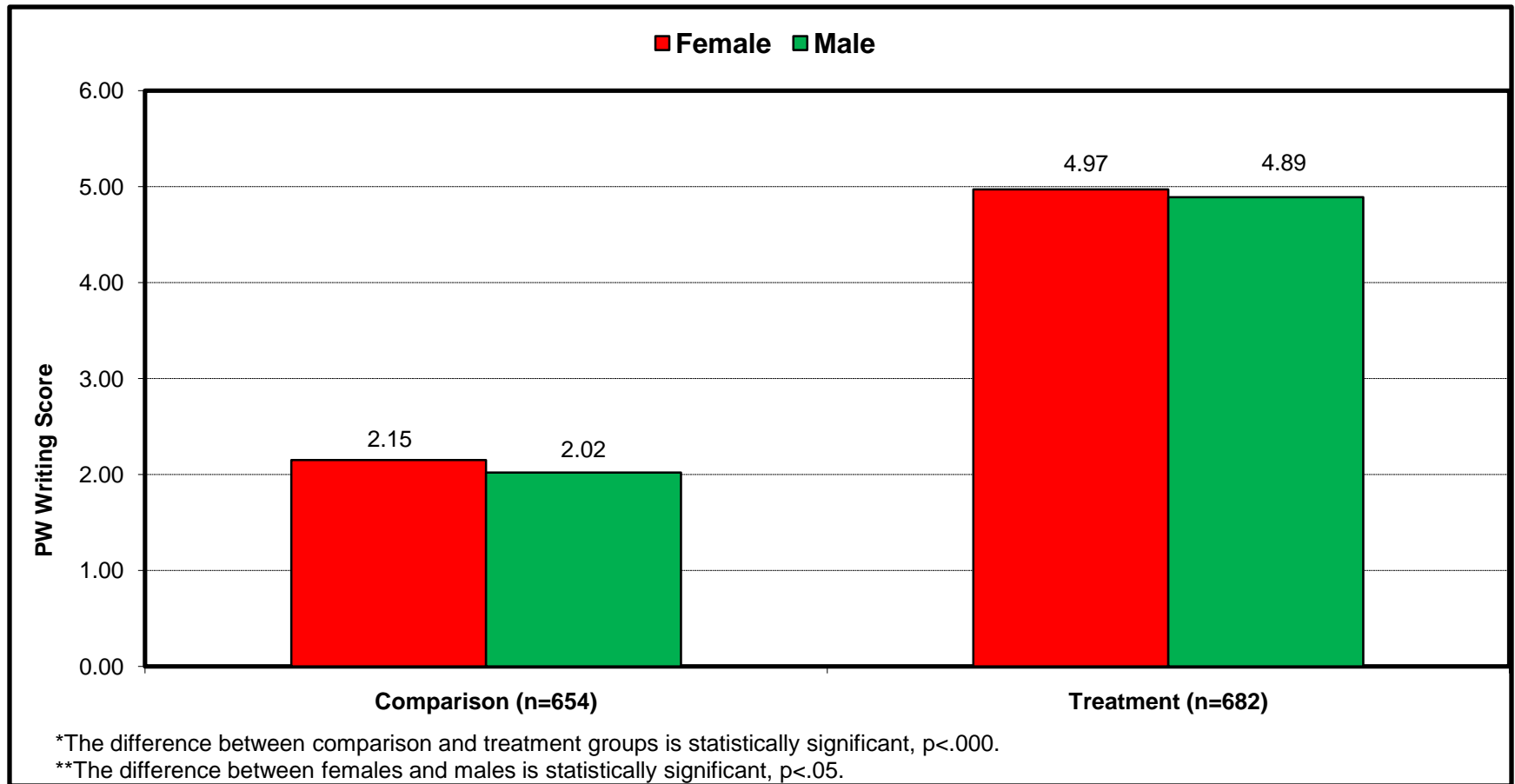
**SPED**

**ELL Mainstream**

**ELL Magnet**

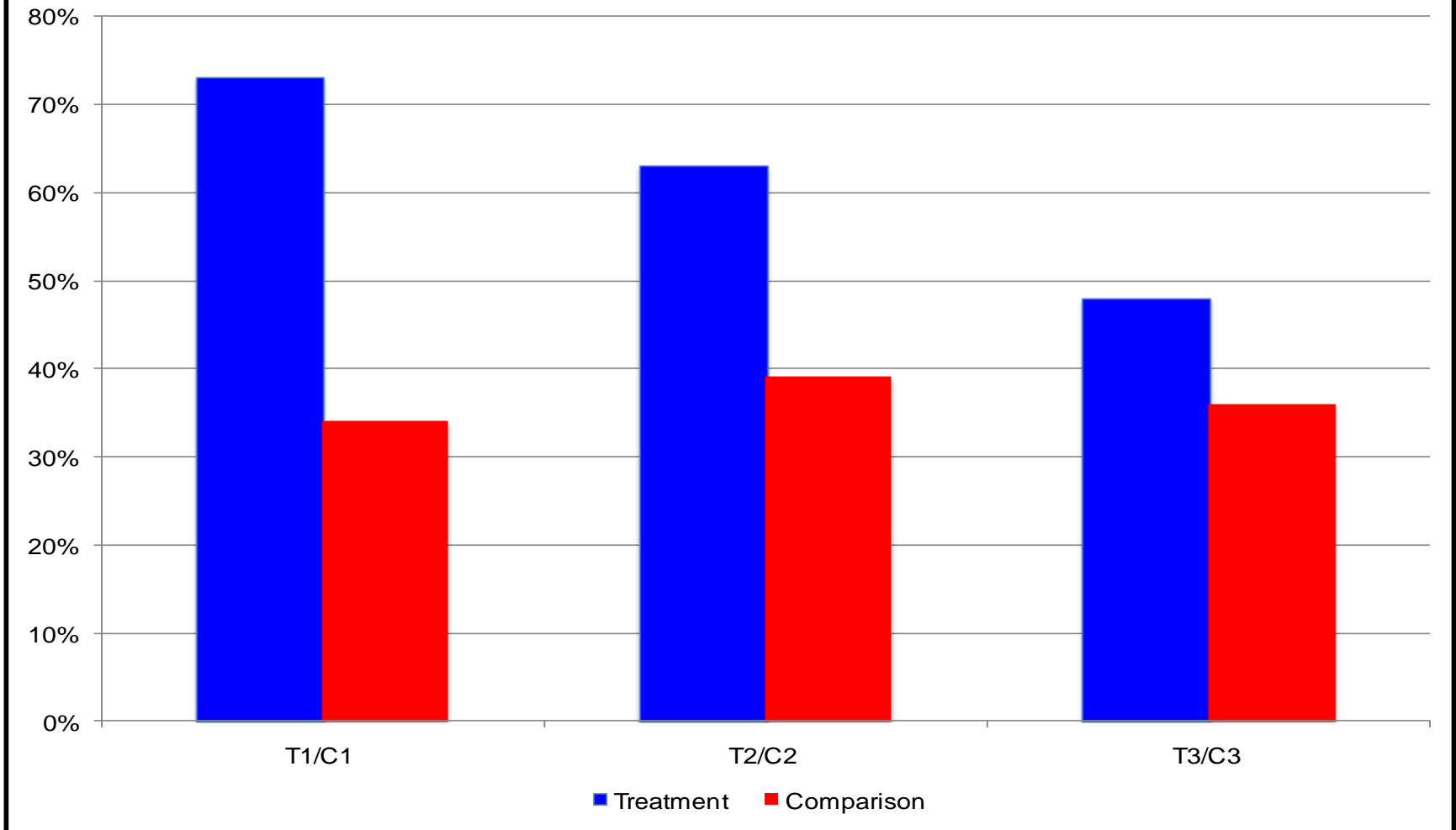
Statistically significant findings were documented each year on visual scores for the treatment subgroups though there was more variation in scores, year-to-year.

## Spring PW Writing Scores Treatment vs. Comparison Groups Female vs. Male: All Grade Levels, 2009-2010

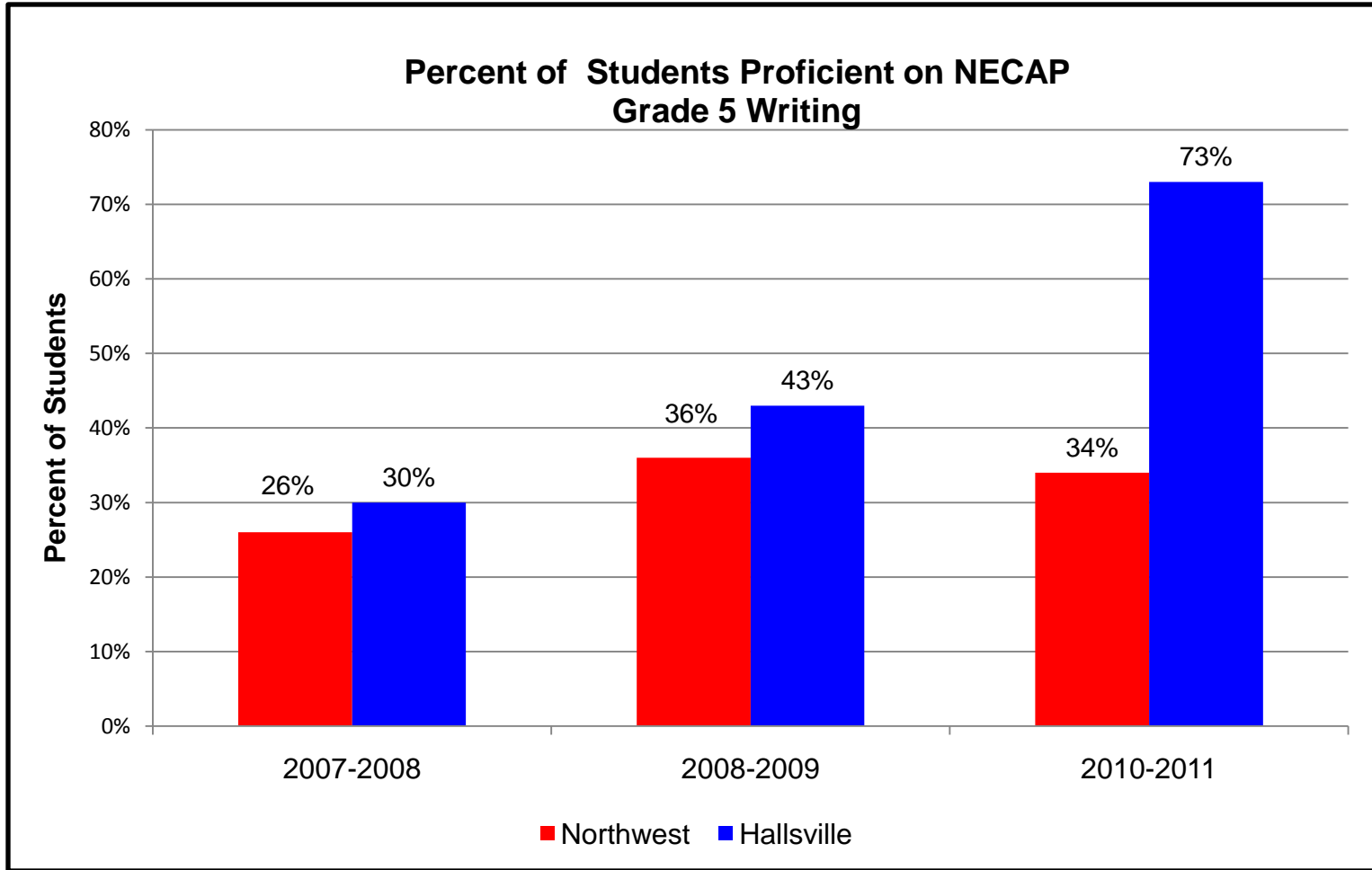


The 2000 National Assessment of Educational Progress reports that across the nation boys lag one and a half years behind girls in reading and writing. Using hands-on, visual PW methods, boys in the treatment group have kept close pace with the excellent scores of the girls in the treatment group. Treatment boys scored well above comparison girls.

### Percentage of Fifth-Graders Scoring Proficient or Above 2010 NECAP Writing Assessment

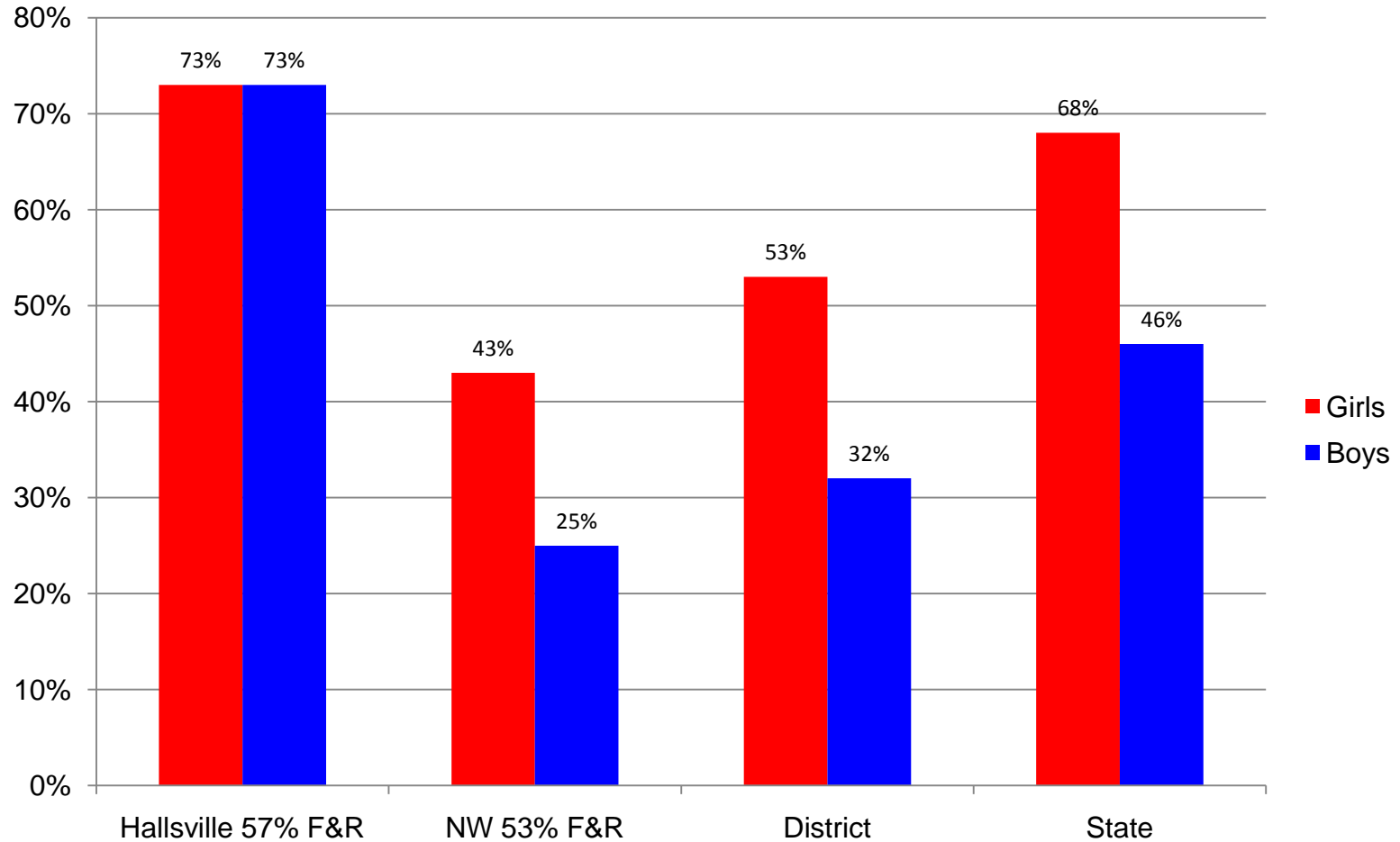


The 3 treatment schools (blue) far outperformed their demographically matched comparison schools (red) on the NH statewide writing assessment administered in grade 5. This test was taken in October of fifth grade with students' last exposure to Picturing Writing being April or May of grade 4. The treatment school with sustained administrative support scored the highest among all six schools despite it having the highest percentage of economically disadvantaged students.



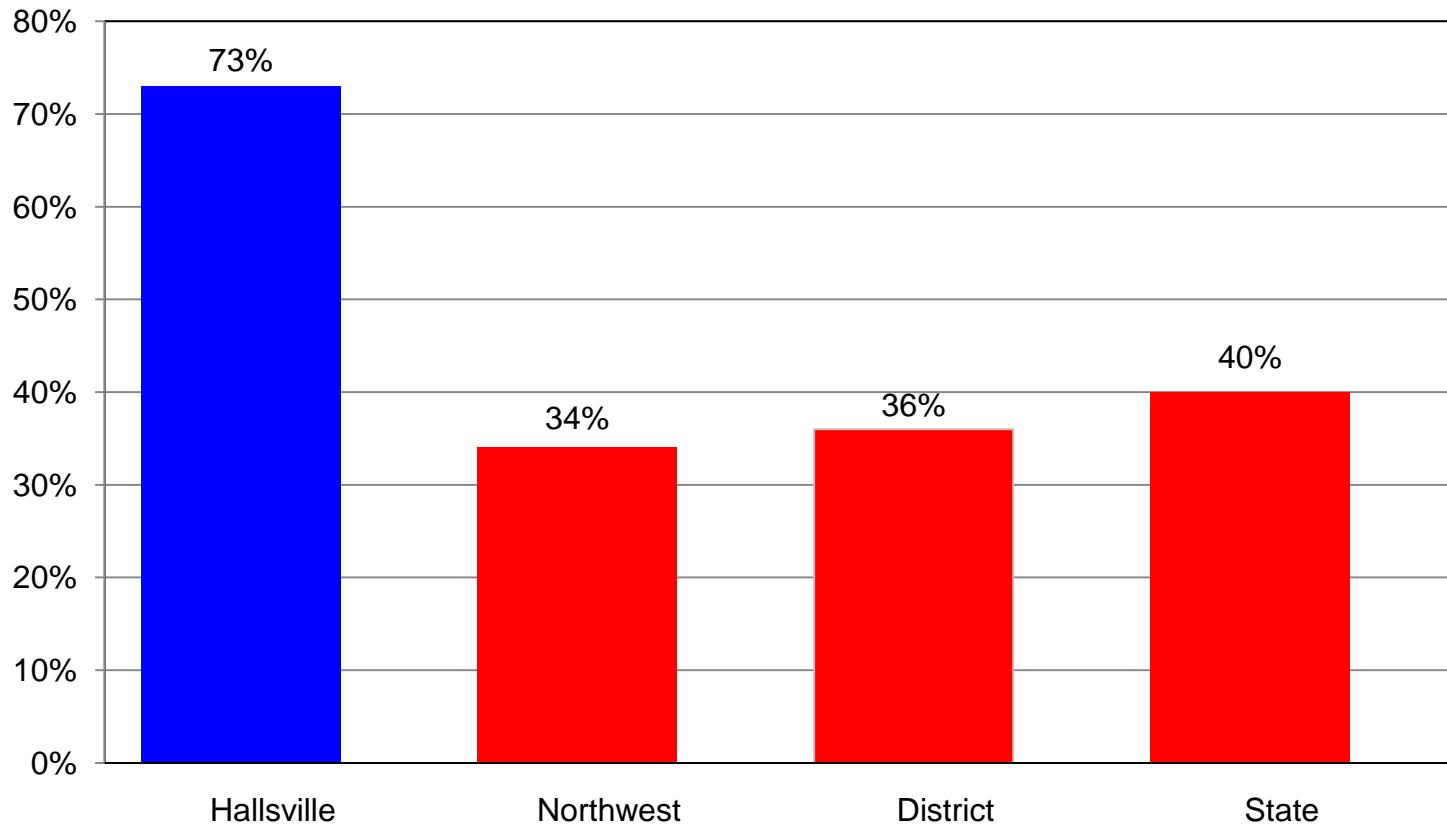
Hallsville, the high fidelity school, showed tremendous growth in writing proficiency on the NECAP tests over the course of the PW adoption. Its demographically matched comparison school did not achieve the same rate of growth or level of proficiency in writing. The State did not score the 2009-2010 NECAP writing assessment thus no data are available.

### NECAP 2010-2011 Disaggregated Gender Data: Percent Scoring Proficient and Above in Writing



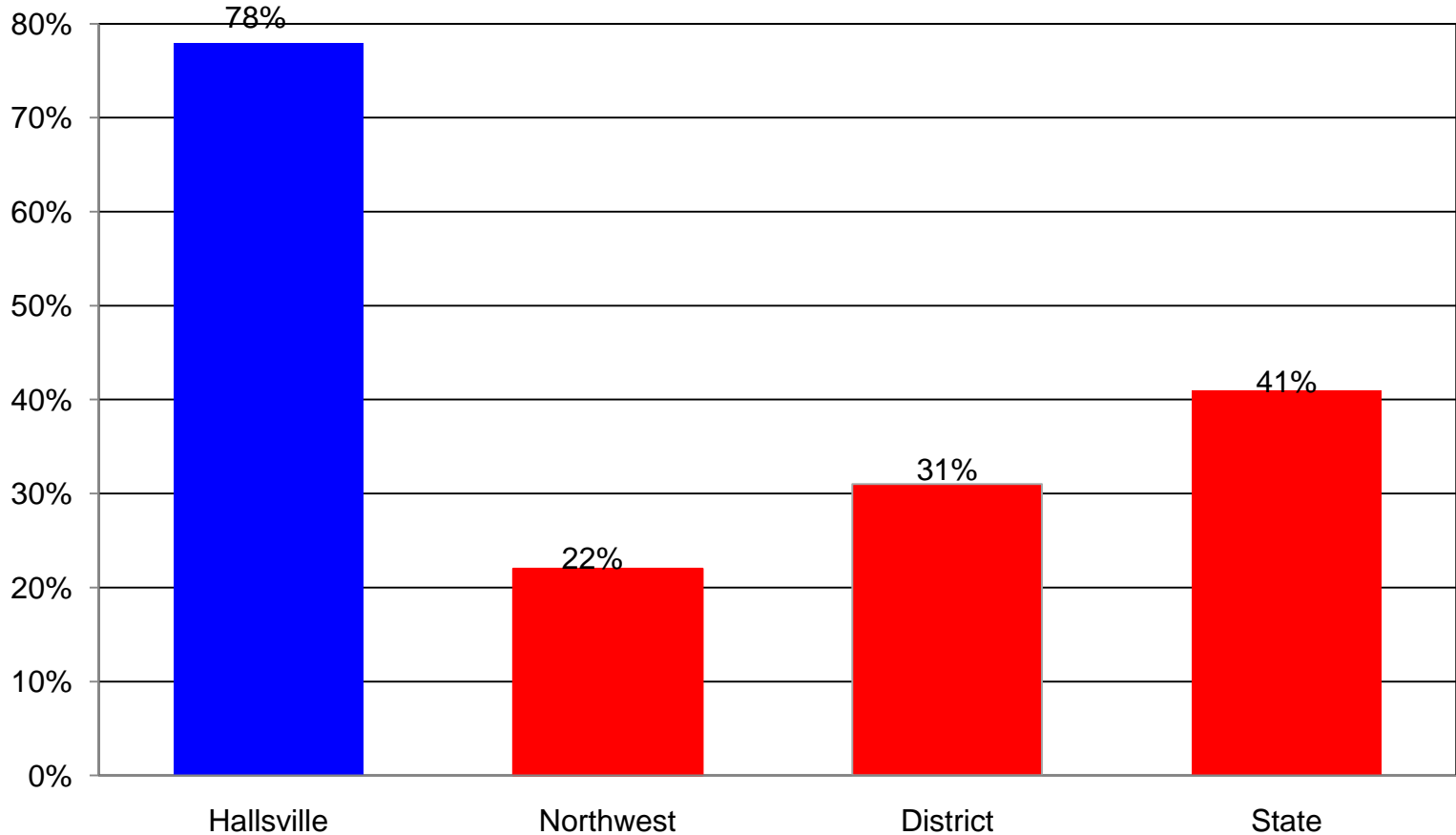
In the high fidelity treatment school (which retained a single supportive administrator over the course of the study), boys and girls scored identically in writing (73% Proficient and above) while comparison school, District, and State percentages were far lower. Also noted are large discrepancies between girls and boys in the comparison school, the District and the State. Treatment boys at Hallsville outscored District and State averages for girls, thus demonstrating the potential for closing the gender achievement gap that exists across the nation.

### NECAP 2010-2011 Title I Data: Percent Scoring Proficient and Above in Writing



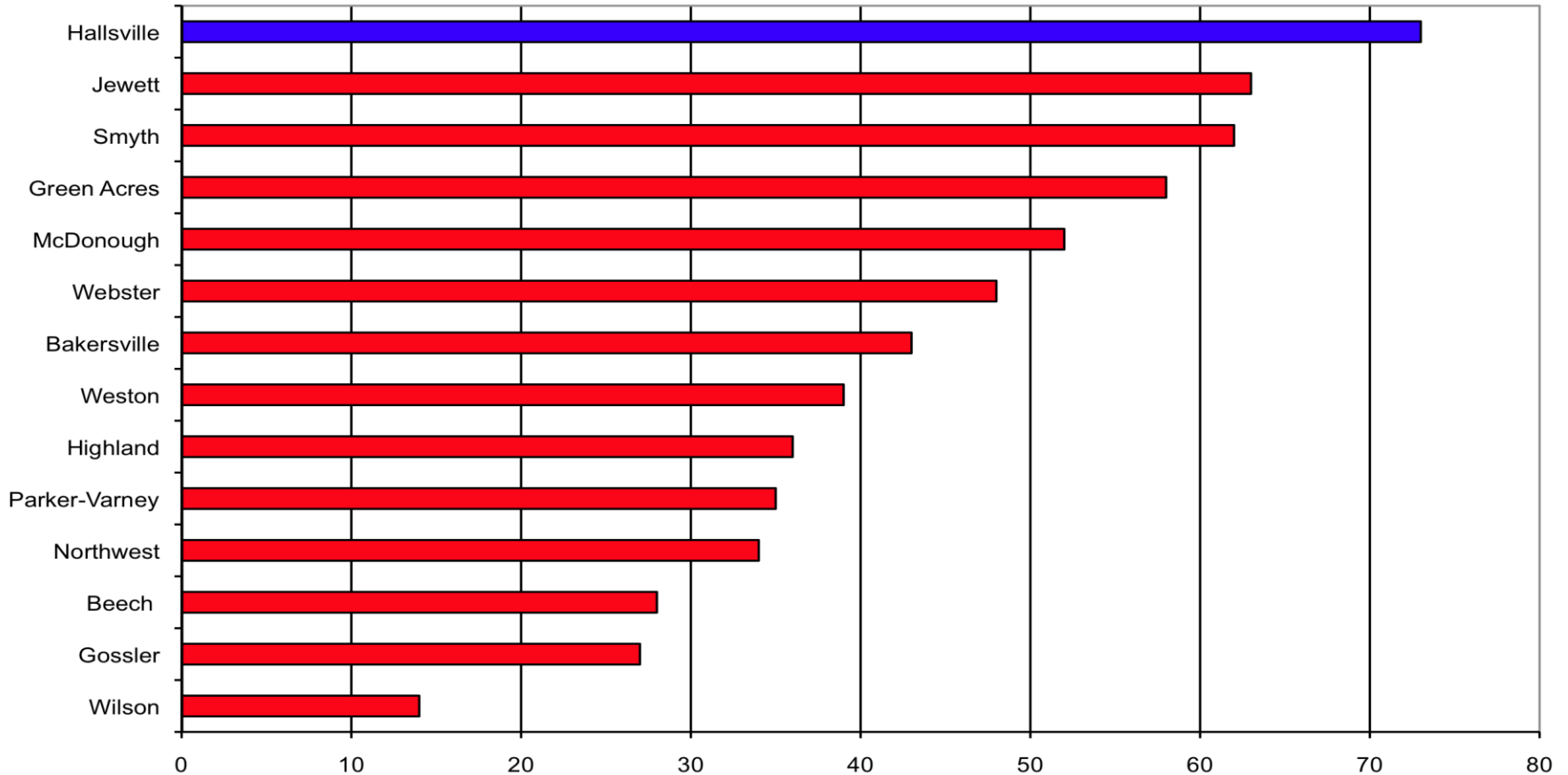
Fifth grade Title I students at Hallsville outperformed Title I students at Northwest (their comparison school), the District, and the State in percentage scoring Proficient and above in writing on the 2010 NH statewide writing assessment.

### NECAP 2010-2011 Economically Disadvantaged Data Percent Scoring Proficient and Above in Writing

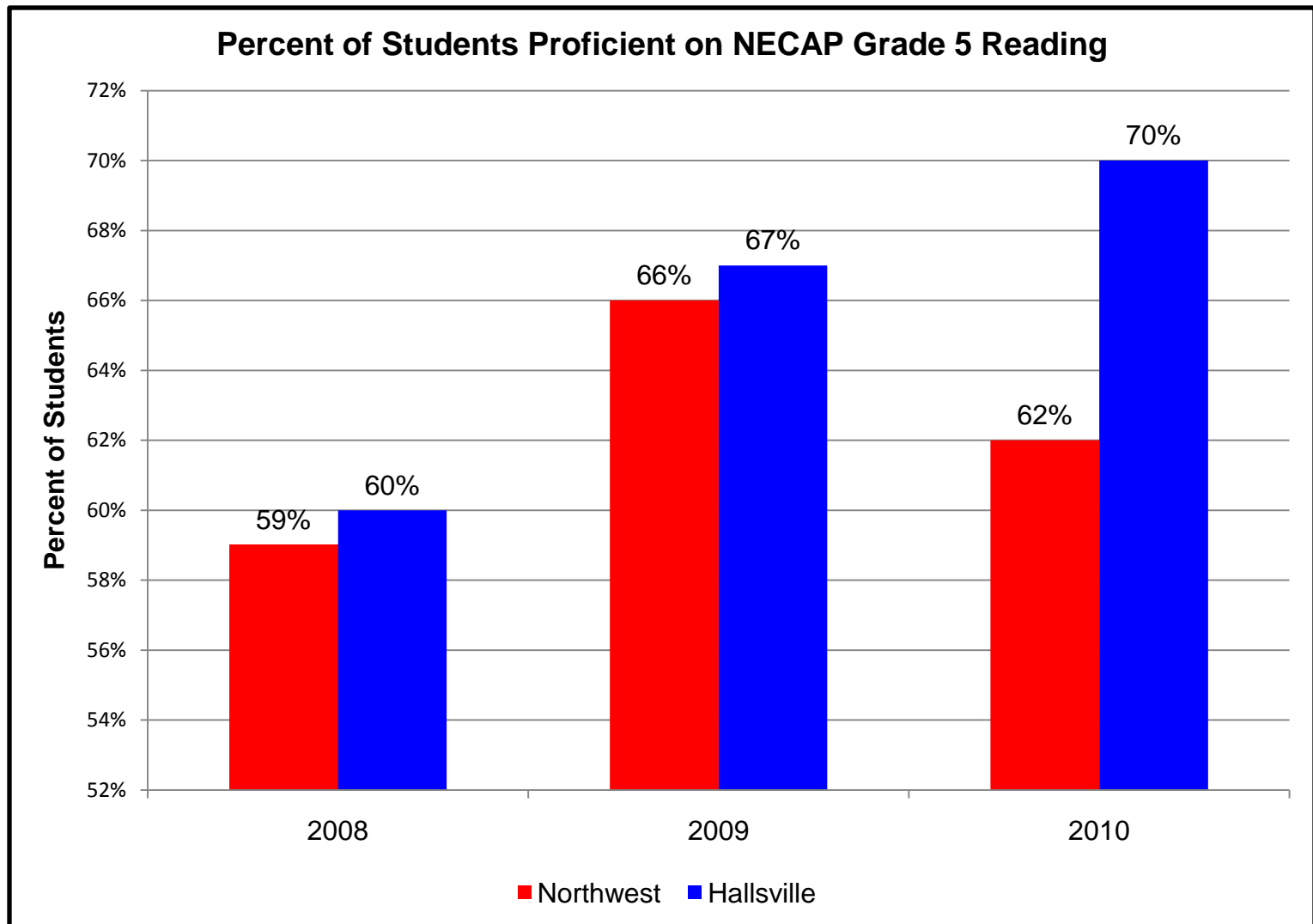


Fifth grade economically disadvantaged students at Hallsville outperformed their economically disadvantaged students at Northwest (their comparison school), the District, and the State in percentage scoring Proficient and above in writing on the 2010 NH statewide writing assessment.

**NECAP Writing 2010-2011  
Percentage Scoring Proficient and Above: Grade 5**

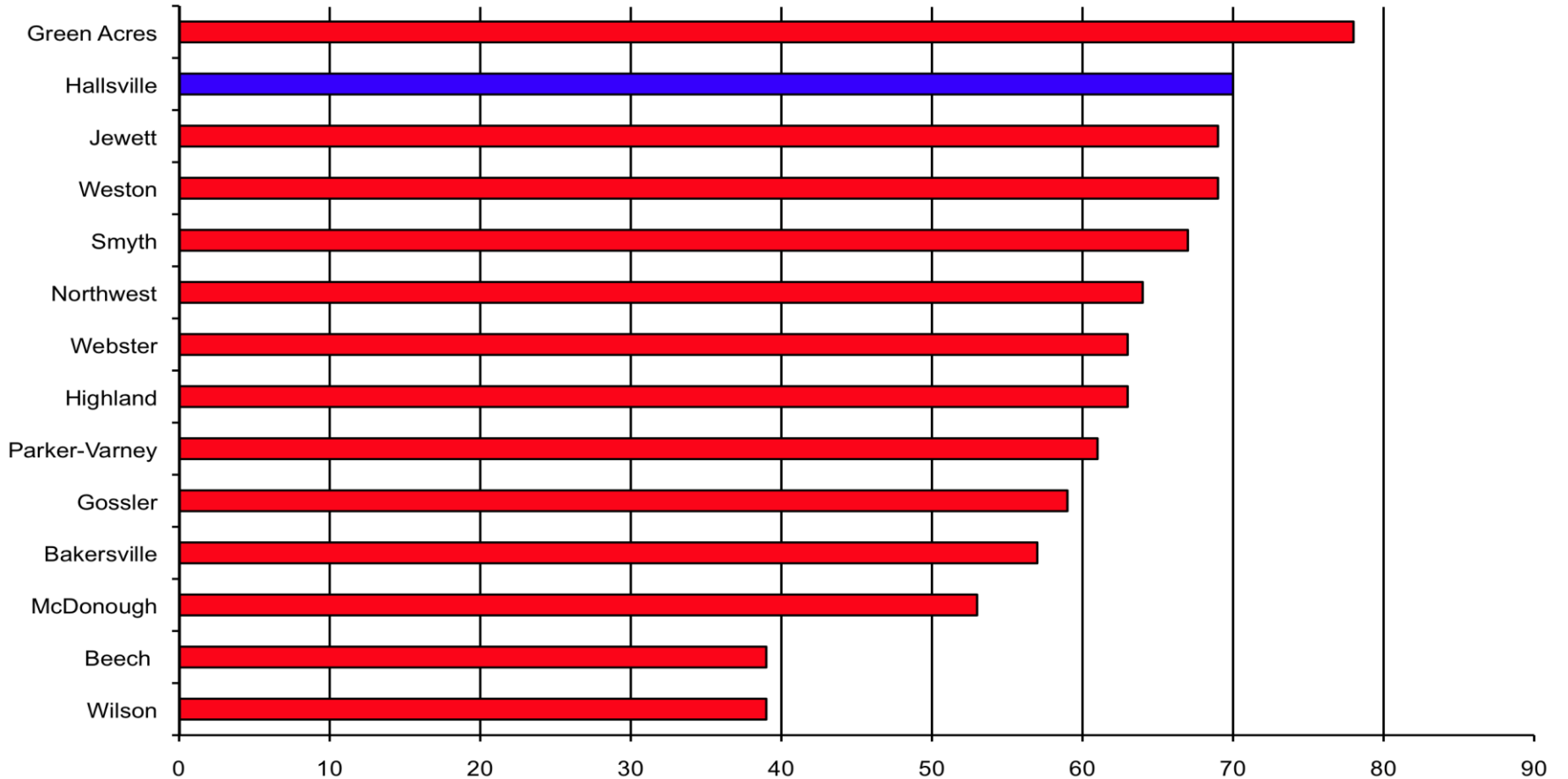


Hallsville Elementary School (with 57% F&R) outperformed all 13 other elementary schools in the District in their statewide 5<sup>th</sup> grade writing assessment. Eight of these schools have lower F&R percentages.



While PW instruction focuses on writing, the percentage of grade 5 Hallsville students scoring Proficient and above on the NECAP Reading statewide assessment increased each year of the research study. The test, administered in October of each year, reflects growth from the prior year. At the beginning of the research study, Hallsville and Northwest (its demographically matched comparison school) were closely aligned in reading scores. By the end of the study, Hallsville students had outperformed Northwest by 8 percentage points.

**NECAP Reading 2010-2011  
Percentage Scoring Proficient and Above: Grade 5**



Hallsville Elementary (57% F&R) scored second in the District on the 2010 NECAP Reading assessment, outperformed only by Green Acres (15% F&R).



In an era of increasing diversity, more and more mandates, and high stakes testing, Picturing Writing engages all students in authentic, joyful learning while closing longstanding achievement gaps.



[www.picturingwriting.org](http://www.picturingwriting.org)

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