

Leveraging Gender Differences to Boost Test Scores

Bill Costello

Gender differences matter in developing boys' lifelong love for reading.

Under the No Child Left Behind (NCLB) Act, the penalties for public schools that do not improve test scores each year and achieve adequate yearly progress (AYP) become progressively more severe. In light of the cumulative and escalating series of penalties that result from failing AYP, principals should ask themselves the following questions:

- What kind of training do I provide for teachers?
- How much training did my teachers receive last year?
- In hindsight, how much should they have received?
- How do I assess the effectiveness of teacher training?

Effective teacher training can prevent schools from failing AYP and can help failing schools to recover. Research consistently confirms that training teachers to understand gender differences and to use related instructional strategies can significantly boost test scores.

IN BRIEF

Teacher training in gender differences can help prevent schools from failing AYP. Teachers who understand how the learning style of boys differs from the learning style of girls can leverage that knowledge to boost test scores by applying it across all four subgroups, which are defined by race/ethnicity, income, disability, or English-speaking ability.





How Understanding Gender Differences Can Boost Test Scores

Officially, there are four student subgroups that must meet all state proficiency goals in order for schools to make AYP. These subgroups are defined by race/ethnicity, income, disability, or English-speaking ability. Unofficially, however, all four of these subgroups consist of just two groups—boys and girls. Teachers who understand how the learning style of boys differs from the learning style of girls can leverage that knowledge by applying it across all four subgroups. By focusing on gender-based instructional strategies, teachers can increase overall student achievement.

It is unfortunate that NCLB has not considered gender in tracking AYP because significant gender gaps exist within each of the four subgroups. The degree to which gender gaps exist at a particular school can be determined by performing additional sorting of the data. Analyzing test results by gender affords schools the opportunity to determine areas of weakness and tailor instructional strategies accordingly so that state proficiency goals can be met.

Schools will find that boys are behind girls in reading scores. This should not come as a surprise; the U.S. Department of Education reports that boys are roughly 1.5 years behind girls in reading skills at all school levels. When patterns such as these emerge, the disparities can be addressed. In this case, for example, teachers can apply specific instructional strategies to bolster boys' reading scores in all four subgroups.

The Reading Gender Gap

According to the 2004 National Assessment of Educational Progress (NAEP)—commonly known as the Nation's Report Card—males who have made it through 12 years of school have significantly poorer reading skills than their female peers. Among white males of college-educated parents, 23 percent scored “below basic” in reading, compared with 7 percent of

their female peers. Among Hispanic males of college-educated parents, 34 percent scored “below basic” in reading, compared with 19 percent of their female peers. Among black males of college-educated parents, 44 percent scored “below basic” in reading, compared with 33 percent of their female peers. Not only does the reading gender gap span every racial and ethnic group, but it also categorically finds boys underperforming girls regardless of income, disability, or English-speaking ability.

In every age group, boys have been scoring lower than girls annually for more than three decades on U.S. Department of Education reading tests. The longer boys are in school, the wider the reading gender gap becomes. For example, NAEP found that the gap at age 9 is five points, at age 13 is 10 points, and at age 17 is 14 points.

Boy-friendly instructional strategies grounded in research can help to transform the disengaged reader into the engaged reader, the struggling reader into the proficient reader, and the reluctant reader into the voracious reader. Below are some strategies that will help teachers improve the reading scores of boys.

Use brain research to inform gender-based instructional strategies. Increasingly, neuroscience is informing K-12 instructional strategies. During the past decade, educators have heartily embraced brain research and the opportunity it provides for scientifically based practice. The previously mysterious “black box” has become transparent with the recent development of neuroimaging technologies such as functional magnetic resonance imaging (fMRI). Researchers are now able to look inside the human skull and view images of the brain as it engages in various activities. What they have discovered is that males and females process information differently.

For example, males listen with only one side of their brain, while females use both sides (Phillips, Lowe, Lurito,

Dzemidzic, & Mathews, 2001). The images of brain activity in males and females engaged in listening shows that only the left hemisphere “lights up” in males, whereas both the right and left hemispheres “light up” in females. The same thing occurs when males and females engage in reading (Shaywitz et al., 1995).

Teachers who receive training in boy-girl brain differences understand why boys take longer to learn how to read, are less able to sit still while reading, tend to read less often, place less value on reading, and score lower on reading tests. These trained teachers are less likely to misdiagnose boys who are struggling readers as having learning disabilities, and more likely to apply research findings that help boys improve their reading skills.

Brain research, when combined with research from other fields—education, gender differences, psychology, and sociology—can effectively inform gender-based instructional strategies that boost test scores.

Offer boy-friendly reading material. It should not come as a surprise that boys and girls also have different reading tastes. Yet teachers often handicap their efforts to get boys to read when they assign reading material that fails to tap into the natural interests and inclinations of boys.

Teachers trained in gender-based education know that one of the best ways to get boys reading is to offer them reading material that motivates them to want to read. Boys are more likely to enjoy reading:

- Nonfiction;
- Stories with action and adventure;
- Stories with male protagonists; and
- A wide variety of reading materials, including books, magazines, newspapers, how-to manuals, Web sites, comic books, and graphic novels.

The first priority should be to get boys excited about reading so they will become lifelong readers. When boys like what they read in school, they're more likely to continue reading and

transition to increasingly sophisticated material. When they don't like what they read in school, they're more likely to discontinue reading and miss out on a primary resource for lifelong learning. It is incumbent upon teachers to enhance curricula by providing access to a wide variety of reading materials (Costello & Kolodziej, 2006).

Provide single-gender reading activities within the classroom. Because boys and girls have dissimilar reading tastes, single-gender learning environments are sometimes more effective than coeducational ones. Often, in coeducational settings, girls dominate book discussions. In single-gender groupings, boys who have less-developed verbal skills and need extra time to formulate their thoughts are afforded more opportunities to participate in discussions.

Single-gender groupings enable teachers to offer boy-friendly reading material to boys and girl-friendly reading material to girls. They also allow teachers to provide disparate reading activities for each gender. Three important reading activities for boys are literature circles, read-alouds, and projects.

In conventional literature circles, students choose their own reading material and spend time discussing it with each other. Also, students are self-reflective as they discuss the interpersonal relationships of the characters they read about. All-boy literature circles differ in that the focus of discussion is on the plot, or action, of a story. Indeed, boys often feel comfortable discussing plot and uncomfortable expressing emotions and feelings.

Read-alouds, or oral readings of written materials, are especially beneficial for boys in several ways. Among them:

- To introduce disengaged, struggling, and reluctant readers to the joy of reading and great literature;
- To familiarize boys with a wide variety of reading materials beyond just books;
- To serve as a bridge to future independent reading; and

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- To increase boys' vocabulary foundation.

Projects designed for boys are kinesthetic learning opportunities that—like all-boy literature circles—focus on plot rather than character relationships. They enable boys to respond to what they read through hands-on activities. Specific projects that engage boys in learning include acting, drawing, map-making, storytelling, and writing.

For example, boys can act out a story after reading it. Boys who are more artistically inclined can draw a scene from a story. Some stories naturally lend

themselves to map-making projects wherein boys construct maps based on descriptive details. Storytelling and writing allow boys to add imaginative details to what they've read and to create their own versions of a story. Not only do projects engage boys in learning, they can also be used for authentic assessment purposes.

Increase the use of male role models for reading. Many boys view reading as an activity for girls and are thereby less likely to read. To change this perspective, male role models are needed. Teachers can actively recruit male role models from two sources: fathers and older boys.

Boys who see fathers reading are more likely to view reading as a masculine activity. In fact, fathers are such strong influences that what they choose to read heavily affects what boys choose to read. For example, fathers are 10 times more likely than mothers to read newspapers, whereas mothers are 10 times more likely than fathers to

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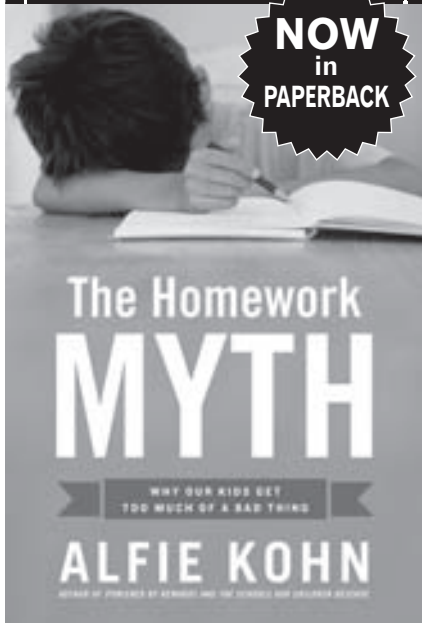
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“Projects designed for boys are kinesthetic learning opportunities that—like all-boy literature circles—focus on plot rather than character relationships.”

read books (Pottorff, Phelps-Zientarski, & Skovera, 1996). It's no coincidence, then, that many boys prefer newspapers over books. To demonstrate that men value reading, teachers can invite fathers and grandfathers from the community to speak about their favorite books and read aloud to boys in the classroom.

Boys from the upper grades can also positively influence boys from the lower grades by serving as male role models for reading. Both groups of students benefit from this relationship. The older boys feel good about being looked up to; the younger boys gain reading skills and an appreciation for reading. Teachers can pair older boys with younger boys and train the older ones to assist during reading instruction, read books aloud, and make books for the younger boys. Male role models for reading are especially beneficial for fatherless boys.

Principals can effectively boost test scores and reach AYP by providing teachers with training opportunities to understand gender differences and related instructional strategies that positively affect not only reading, but all subjects across the curriculum. 

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WEB RESOURCES

Children's book writer Jon Scieszka offers suggested reading for boys. www.guysread.com

The Indiana University School of Medicine's Department of Radiology has made available images of brain activity in men and women while engaged in listening. www.medicine.indiana.edu/news_releases/archive_00/images/brainscans.jpg

The National Assessment of Educational Progress examines trends in average reading scale scores by gender. www.nces.ed.gov/nationsreportcard/ltr/results2004/sub-reading-gender.asp

