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Author(s): Brozo, William G.; Sulkunen, Sari; Shiel, Gerry; Garbe, Christine; Pandian, Ambigapthy; Valtin, Renate

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Teaser Text: Findings from an international reading assessment reconfirm that girls are more engaged and better readers than boys. The authors offer several guidelines for addressing the reading gender achievement gap.

Reading, Gender, and Engagement: Lessons from Five PISA Countries

William G. Brozo is a Professor of Literacy at George Mason University, Fairfax, Virginia, USA; wbrozo@gmu.edu

Sari Sulkunen is a Senior Researcher at the University of Jyväskylä, Jyväskylä, Finland, sari.sulkunen@jyu.fi

Gerry Shiel is a Research Fellow at St. Patrick's College, Dublin, Ireland, Gerry.shiel@ere.ie

Christine Garbe is a Professor of German Literature and Didactics at the University of Cologne, Cologne, Germany, Christine.garbe@uni-koeln.de

Ambigapathy Pandian is a Professor of Literacies and Translation at the Universiti Sains Malaysia, Georgetown, Penang, Malaysia, ambiga@usm.my

Renate Valtin is former Professor of Primary Education at the University of Humboldt, Berlin, Germany, renate.valtin@gmail.com

In 2009 the Program for International Student Assessment (PISA) completed its fourth cycle.

And an important one it was, as now we have nearly a decade of data on reading literacy trends and patterns of achievement for 15-year-olds from across the globe. This article brings attention to important PISA findings relative to gender-based achievement; a timely focus, as the United States and countries around the world confront growing evidence for a persistent gender gap in reading literacy from international, national, and state-level assessments (Chudowsky & Chudowsky, 2010; Egelund, 2012; EU High Level Group of Experts on Literacy, 2012; Klecker, 2006; National Literacy Trust, 2012). We also give special attention in this article to the interaction of reading engagement with gender because engagement may be the single criterion

that distinguishes nations with the highest and lowest levels of student achievement (OECD, 2010).

We, the authors, are members of the PISA/PIRLS Task Force, representing the United States, Ireland, Germany, Finland, and Korea. Originally established by the IRA, the Task Force is now sponsored by the Federation of European Literacy Associations. Our charge has been twofold: (1) to analyze the findings of cross-national testing efforts and propose policy and practice recommendations based on those findings, and (2) to raise awareness among educators in the United States of the importance of PISA and PIRLS. In the 10 years since its formation, the task force has been promoting forums for dialog on global patterns of reading literacy achievement for children and youth and their implications for researchers, practitioners, and policymakers within and across participating countries.

Although the task force has fulfilled its first charge, there is a lingering realization that greater efforts are needed to achieve the goal of raising the level of awareness of the significance of PISA among U.S. educators. Even today, after four cycles of PISA and numerous reports on the findings for American youth from the National Center for Education Statistics and the Organization for Economic Cooperation and Development (OECD), many in the United States, including many teachers, are unfamiliar with PISA assessments. This is not altogether surprising considering the United States has its own National Assessment of Educational Progress (NAEP) and that educators place most of their attention on school- and classroom-level results from state and district assessments of reading. In Europe, Asia, and other parts of the world, however, PISA might be likened to their version of NAEP. Countries compare each other closely on overall rankings as well as on a range of related variables, and public dialog and national

education policy are strongly influenced by PISA findings (EU High Level Group of Experts on Literacy, 2012).

Thus, the question might be asked: Are PISA findings relevant to teachers in the United States? We believe so. First, PISA is a massive study using rigorous assessment standards, and because large numbers of U.S. 15-year-olds participate, it only makes sense to become knowledgeable about its key findings for adolescents from the U.S. and search the data for results that have relevance to literacy curriculum and instruction. Second, American teachers can gain much from the lessons learned by educators from other nations who have already turned PISA data into policy initiatives and practical reforms. Another reason is that we hear much in the rhetoric of leaders from each of our countries that raising reading achievement of youth and ensuring they develop 21st Century literacy skills will better prepare them for the new global economy (Resmovits, 2013). If this assumption is correct, it would be prudent to learn from one another about how best to prepare youth for these new global challenges, which include ensuring they have sophisticated and adaptive literacy abilities (Learning Metrics Task Force, 2013). The findings of PISA in the area of reading literacy and its relationship to gender and engagement provide teachers in the United States as well as teachers throughout the world a common focus for curricular and policy reform that could lead to increases in achievement for adolescent boys.

What is PISA?

PISA, under the auspices of the OECD, is an international survey of achievement of 15-year-olds, including the United States, which occurs in three-year cycles. In each cycle, three domains of literacy are assessed with one emphasized. In 2000, the year PISA was launched, reading literacy was the focus; in 2003 and 2012, mathematical literacy; in 2006, scientific literacy; and in 2009, reading literacy again. The 2009 findings, like the 2000 findings, remain

enormously important for literacy professionals because they are the only two cycles that have yielded very rich databases of reading literacy achievement as well as of demographic, instructional, and attitudinal variables related to reading habits and practices. A similar database will not be available again until the results of the PISA 2018 cycle, emphasizing reading literacy once more, are published. Because emphasis in the other cycles is on either science or math literacy, they only produce very general data on reading literacy, limiting opportunities for fine-grain analysis. The findings presented here tap into the rich data base of the 2009 cycle.

Approximately 470,000 students completed the assessment in 2009, representing about 26 million students in the schools of the 65 participating countries—34 OECD member countries and 31 partner countries. Combined, these countries comprise 90% of the world economy.

PISA seeks to measure how well young adults, approaching the end of compulsory schooling, are prepared to meet the challenges of today's knowledge societies. The assessment targets youths' ability to use their knowledge and skills to meet real-life challenges, rather than merely on the extent to which they have mastered a specific school curriculum. The PISA test of print reading comprises both continuous (articles, essays, etc.) and non-continuous (graphs, data tables, etc.) texts. Questions are categorized as Access and Retrieve, Integrate and Interpret, and Reflect and Evaluate. Texts and questions are distributed over four reading situations – Personal, Public, Occupational, and Educational. The digital reading test also comprises continuous and non-continuous texts, though most electronic texts are categorized as multiple texts, which are defined as discreet texts that are juxtaposed for a particular occasion or purpose (for example, a job advertisement and a follow-up e-mail). Similarly, digital texts include the three question types referred to above, as well as 'complex' questions, which involve multiple demands.

To be sure, international assessments of reading literacy are not without controversies. Concerns about PISA have been expressed over language translations, sampling procedures, and even test item theory that underpins the specific types of questions on the assessment (Baird et al, 2011; Goldstein, 2004). Others have challenged the way policy makers often use overall PISA results to make glib, unnuanced comparisons with other countries, without adequate understanding of the demographics of the students in the test sample. For example, Carnoy and Rothstein (2013) have suggested that because the United States has a disproportionately larger number of disadvantaged and low-income students relative to other participating countries, and, consequently, more of these students find themselves in the PISA testing sample, it is difficult to equate U.S. performance on PISA with these nations, especially those in Europe and Asia.

Another critique has to do with PISA's item formats, which have been suspected to favor girls. Approximately half of the reading items on PISA 2009 were open response type. Of these, about a third were the longer constructed type, calling for students to develop and explain their response, while the remainder requiring only short answers. Raising suspicions of possible item format bias, Rauch and Hartig (2010) found in their large empirical study of PISA 2009 that boys performed significantly less well than girls on the open-ended items, which are designed to tap higher-level reading processes, while boys were equally competent as girls on the closed response items.

In spite of some legitimate criticism, it cannot be denied that OECD takes great pains to achieve valid PISA results through (1) robust quality assurance mechanisms for translation, sampling and test administration; (2) measures to achieve cultural and linguistic breadth in the assessment materials, particularly through countries' participation in the development and revision processes for the production of the items; and (3) state of the art technology and

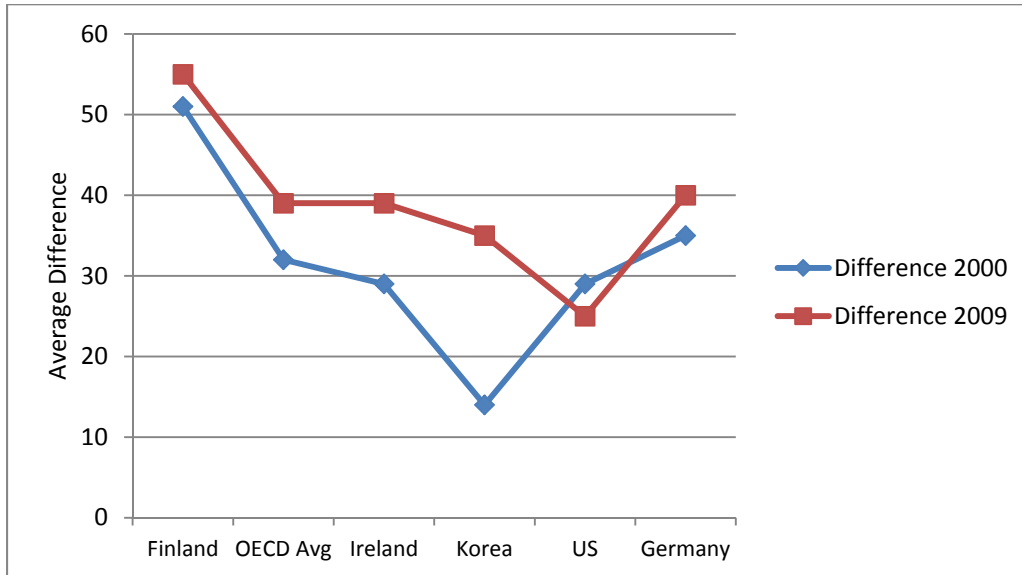
methodology for data handling. According to OECD (2009), “The combination of these measures produces high quality instruments and outcomes with superior levels of validity and reliability to improve the understanding of education systems as well as students’ knowledge, skills and attitudes” (p.10).

The next section of the article is a summary of major gender differences in performance found overall on PISA 2009, along with relevant trends since 2000. The five countries represented by the authors will be highlighted in this summary, which includes findings related to the interaction of engagement and reading literacy achievement by gender. These data are foregrounded from PISA because they add further evidence of a serious global pattern of boys’ underachievement in reading and lower reading engagement relative to girls. This will be followed by a discussion of what each of our five countries has done in response to the gender gap in reading literacy. The article concludes with guidelines for closing the gender achievement gap for boys, based on PISA results and any promising national initiatives.

Gender Differences in Overall Performance and Reading Engagement

Consistent with earlier PISA cycles, there were significant gender differences in favor of girls on overall print reading in all 65 countries in PISA 2009 (OECD, 2010). Moreover, gender differences increased over PISA cycles. For the five target countries (see Figure 1), Korea’s difference more than doubled from 16 to 35 points from 2000 to 2009. It dropped slightly in the U.S. (from 29 to 25 points), though the four point decline was not statistically significant (OECD, 2010). Overall, the average gender difference across OECD countries increased by 10 points, from 29 in 2000 to 39 in 2009.

Figure 1: Gender Differences in Overall Print Reading Literacy in Five Target Countries and on Average across OECD Countries (2000 and 2009)



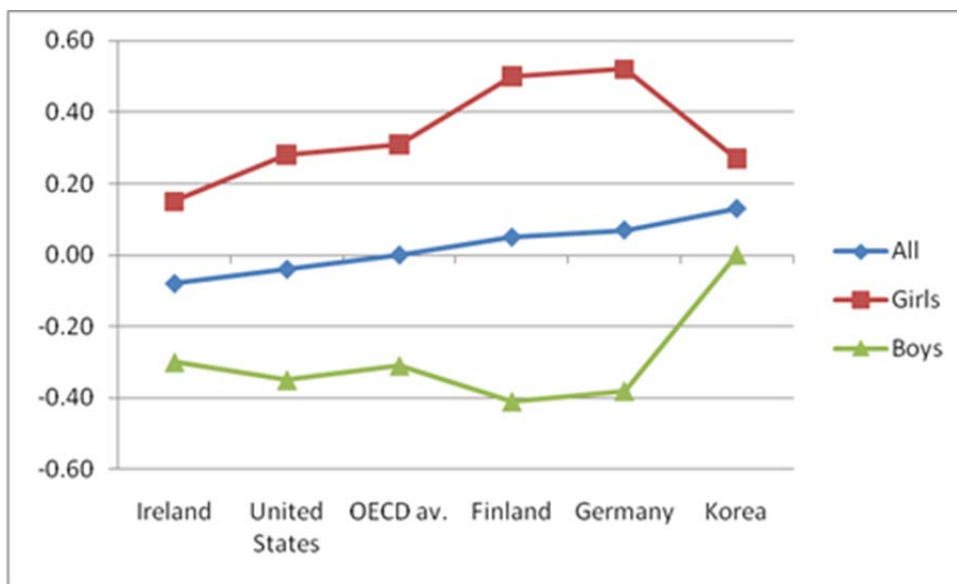
As part of PISA 2009, an optional test of digital literacy was administered in 19 countries, including Korea and Ireland, but not Finland, Germany or the United States. Girls performed significantly higher than boys on the electronic reading portion in 18 of the 19 participating countries. However, the OECD average difference in favor of girls for online reading was 25 points, compared with an average difference of 39 points on print reading. In Korea, the gender difference on digital reading was 18 points, compared with 35 points on print reading. In Ireland, the corresponding differences were 31 points and 39 points respectively.

With respect to reading engagement, the variable with one of the strongest links to reading performance for all the countries participating in PISA 2009, it is important to consider how it's defined and measured on PISA . In order to derive composite indices comparable to achievement and other variables, the reading literacy tasks of PISA 2009 were accompanied by a student questionnaire that gathered data on three aspects of reading engagement: (1) enjoyment

of reading, (2) time spent reading for enjoyment, and (3) diversity of texts read (i.e., a single type of text, such as newspapers, versus a wide variety of texts, such as newspapers, magazines, fiction, nonfiction, etc.). The indices are very useful for comparing countries and groups within countries, such as boys and girls, to each other. On all three dimensions of reading engagement, girls had significantly higher indices than boys for each of the five authors' countries.

Regarding *reading enjoyment*, overall, the girls had significantly higher levels of enjoyment than boys, particularly in Finland and Germany (see Figure 2). In Korea, the gender difference was the smallest among the five countries. Ireland had the second smallest gender difference. In the U.S. the gender difference in enjoyment of reading was on the level of the OECD average. The only exception to the rule was Korea where boys' levels of reading enjoyment were clearly higher than that of their male counterparts in the other four countries and relatively high for boys in any country. Still, this was clearly lower than Korean girls' appreciation of reading.

Figure 2: Index of Reading for Enjoyment Mean Scores in Five Target Countries and on Average across OECD Countries (2009)



On the engagement dimension of *time spent reading*, girls were notably more frequent readers than boys in the selected five countries, with the exception of Korea where the gender difference was not statistically significant. Again, in Finland and in Germany the gender difference in the percentage of students reading daily for enjoyment was pronounced (28 percentage points) followed by the US (22 percentage points) and Ireland (11 percentage points).

On the *diversity of reading* dimension of reading engagement, in all of the five countries, girls showed higher diversity of print reading than boys, and the gender difference was statistically significant in all but Germany. The gender difference was most pronounced in Finland, followed by the U.S. and Ireland, and Korea, where the difference was somewhat smaller. Both among girls and boys, the Finnish students' diversity of print reading was the highest. In the other selected countries, girls' diversity of print reading was below the girls' OECD average, as was that of boys' with the exception of Korea. Both in the U.S. and in Germany the diversity of print reading was notably low for girls and boys alike. This was true for Irish boys, too.

There was a gender difference in the diversity of online reading in all the selected countries, but unlike in print reading the difference was not always in favor of girls. In Ireland, Korea, and in the United States, in particular, the diversity of online reading was higher for girls than for boys. In Ireland, the difference was not statistically significant. In Finland and in Germany, however, boys' diversity of online reading was higher than that of girls.

Overall, the gender differences in engagement in reading are substantial across the OECD countries and the five authors' countries. In our selected countries, girls are clearly more engaged in reading than boys. Also the gender difference in reading performance seems to be in significant part attributable to an engagement gap. If boys had the same value on the index of

enjoyment of reading as girls, the gender difference in the five countries would be reduced to less than half of the observed difference. In Germany and the United States the gender difference would almost disappear. Since higher engagement in reading is strongly associated with performance, regardless of socio-economic group, in all participating countries (OECD, 2010), increasing engagement may be the key to increasing reading literacy achievement for boys.

How Have Our Task Force Countries Responded?

The evidence from PISA 2009 reinforces a trend in gender-based reading achievement for virtually every nation that has participated in the assessment since its first cycle in 2000, including the authors' five countries. In light of these recurring findings that girls' reading literacy achievement and engagement is significantly higher than boys, we explore in this section any known national responses from our countries that support efforts to better understand the phenomenon or policy initiatives to close the achievement gap.

Finland

The gender gap in reading and in reading engagement in Finland were some of the widest among the 65 countries participating in PISA 2009. This difference was already quite pronounced in Finland in the first PISA assessment in 2000 (OECD, 2001), and warning signs about it had also been seen in Finnish national assessments since the 1990s (Lappalainen, 2000)

In spite of mounting evidence, only after the first indications of decline in overall performance in reading in the 2009 PISA assessment has the gender issue finally made it on the national educational agenda. In August 2012 the Ministry of Education launched a program, *Lukuinto* (freely translated as Joyread), to strengthen the literacy of 6–16-year-olds and increase their reading engagement. Boys are a special target group for this initiative since they are

overrepresented among the low performers (Ministry of Education and Culture, 2012).

Unfortunately, the program is advocating a set of very traditional practices that are unlikely to offer any permanent solutions for the gender issue.

The revision of the national curriculum which started in 2012 has greater potential for addressing the gender differences in reading. What gets emphasized more than ever before is reading engagement, a wider range of texts with student choice, and intensified reading instruction. These elements have been in the national curriculum at least since 2004 but now will be integrated into the frameworks of multiliteracies and disciplinary literacy, which have potential to align literacy practices in the schools with 21st century skills all youth need. The curriculum may be especially effective for boys because it promises to develop their literacy in meaningful activities with a diverse selection of texts, instead of reading traditional literature far removed from the interests and lives of boys and young men in contemporary society (Sulkunen, 2012).

Korea

PISA 2009 revealed that Korea made major reading literacy achievement gains, as both boys and girls showed advancement, climbing from 525 points in 2000 to 539 points in 2009 (OECD, 2010). In spite of overall gains by both genders in Korea, the gap in favor of girls has widened by 20 points in the 2009 PISA assessment (See Figure 1).

It can be suggested that girls have benefitted greatly from the gender policies in education (Sung, 2004) that are responsible for advancing women's performance and achievement in all aspects of institutional, cultural, and political life. The performance of girls in the 2009 PISA assessment may be a clear indication that national policies and practices in Korea, such as

gender-equal curriculum, guidance programs for female students, as well as female-friendly curriculum and learning environments are achieving the desired goal.

But the literacy gender agenda that focuses on the performance of boys in the Korean setting may need closer scrutiny as boys have fallen significantly behind girls in reading. Concerns about boys' underachievement in reading deserve serious attention as it is linked to achievement in other areas of education and can impinge upon their career and future life opportunities. Currently, there is little national discussion around the academic performance and reading literacy achievement of boys. Thus, in Korea boy-centered research initiatives or school-level strategies that focus on boys' reading struggles need to be addressed, giving specific thought and action on interests and experiences of male avid readers, reluctant readers, and less-able readers, as well technology-driven reading practices in the digital era (Alvermann, 2005). It may be time to exercise similar political will to ensure boy's underachievement in reading literacy is thoroughly explored and a national action plan is put in place to address this growing gender-based achievement gap.

Germany

In Germany, the results of the first and fourth PISA cycles have given clear evidence that the lowest achievers in reading literacy share three general characteristics: low SES, migrant background, and male gender. In spite of this pattern, no national government level programs targeted specifically to the reading and learning needs of boys have been proposed or implemented. Nevertheless, efforts are being made to address the gender achievement gap.

For example, Stiftung Lesen (Reading Foundation), a national foundation that organizes large reading promotion projects, started a project translated as "My Daddy Reads to Me! A Reading Aloud Service for Fathers in Their Workplace". Via their firm's intranet, fathers receive

a guide to reading aloud and a weekly story that they can download and read to their children (ages 0-12 years). These fathers, as role models, help boys, in particular, realize that males, and not just mothers or older sisters, read aloud in the family. This campaign is already in place in five federal states, where it enjoys considerable support of many employers (<http://www.stiftunglesen.de/mein-papa-liest-vor>).

In the Federal State of Baden-Württemberg, the project "Kicken und Lesen" ("Kicking and Reading") has been ongoing since 2007. It is aimed at boys aged 10-14 years. With the cooperation of schools, male youth are provided guidance and support from public libraries and famous professional footballers, who help boys learn to combine sport and reading within exciting projects. This successful project is also being used in other federal states (<http://www.kickenundlesen.de/>).

At the University in Cologne, a reading researcher and a children's author have built an internet platform for the promotion of boys' reading ("Boys & Books" www.boysandbooks.de), which was launched in October 2012. It presents books (fiction and non-fiction) appealing to boys between the ages of 6 and 18, along with good practice projects that engage boys in reading activities in schools and libraries. The website also describes the research that underpins the narrative models attractive to boys, and their reading and media preferences (Co-Author, 2008).

Ireland

In Ireland, the gender gap in favor of female students on overall print reading in PISA increased from 29 points to 39 between 2000 and 2009. The mean scores of both male and female students in Ireland dropped significantly between 2000 and 2009, although the drop was greater for male students (by 37 points) than for females (26). Furthermore, 48% of male

students, compared with 36% of females, indicated they did not engage in any reading for enjoyment. On the other hand, more male students than females reported that, on a weekly basis, they search online for information about a topic and search for practical information. Hence, the smaller gender gap on digital reading in Ireland may reflect higher levels of engagement in digital reading tasks by male students.

In 2011, the Irish Department of Education and Skills (2011) launched a National Strategy to Improve Literacy and Numeracy. The Strategy, which is designed to improve overall literacy and numeracy levels in the period 2011 to 2020, acknowledged the lower performance of males relative to females in PISA, and in the education system more generally. It pointed to a need to provide boys with more opportunities to engage with non-literary texts and other texts in which they show an interest. The Strategy called for changes to curricula in both English and Irish at lower-secondary level that would lead to greater engagement by all students, including male students, with a broader range of texts.

A subsequent document, designed to support schools and teachers in developing policy in the literacy area (Perkins et al., 2011), focused on a need to direct the attention of teachers and students to ways in which gender (as distinct from biological sex) is constructed socially, both in and out of school, how this impacts on students' lives and is endorsed by others, and how gender is portrayed across subjects and texts. The report identified critical literacy (e.g., Luke, 2000, Berhman, 2006) as a framework that could be drawn on to enhance students' awareness of stereotypes promoted by some texts, and to deconstruct the meaning or value being privileged. According to Murphy (2009), this approach celebrates the diverse ways in which masculinity and femininity can be experienced and negotiated within school or societal settings. It acknowledges

that literacy lessons and texts contribute to reproducing gendered norms, and that such norms can be constructed, validated or challenged by literacy activity.

Policy makers in Ireland have also suggested that the way in which schools organize learning may accentuate gender differences in performance and disengagement from school (Joint Oireachtas Committee on Education and Skills, 2010). In particular, they point to the over-representation of low-SES boys in the bottom streams in schools and hence a need for greater integration of students with differing ability levels and interests in school settings.

United States

As was pointed out in the opening of this article, findings about gender differences or any other interesting and significant relationships derived from PISA may go relatively unnoticed in the United States. This is not to say that boys underachievement in reading relative to girls doesn't attract concern in the U.S. For instance, in 2010, the Center on Education Policy (Chudowsky & Chudowsky, 2010) reported that on all 50 state-level tests of reading, girls significantly outperformed boys. This finding brought into focus once again reading achievement disparities between the genders, a phenomenon that has for many years been the target of research in the U.S. (Brozo, 2010). Thus, gender differences in reading on PISA reinforce similar patterns found on virtually every state test. This same pattern holds true on NAEP with boys at all three grade levels assessed (4th, 8th, 12th) underperforming relative to girls to a significant degree (Klecker, 2006; National Center for Education Statistics, 2011).

Nonetheless, in spite of sensational media stories (c.f., Hoff Sommers, 2013) and forceful reports on boys' lower literacy achievement (c.f., The Education Alliance, 2007), a federal response specifically targeted to the gender-based reading achievement gap has not emerged. Instead, there is a general sense that education policy in the No Child Left Behind Act of 2001,

which requires school systems to close achievement gaps wherever they are found, means the issue is being addressed. With respect to the Common Core State Standards (CCSS), closing the gender gap in reading literacy does not appear to be an expressed goal, even though its proponents envision all students benefitting from more rigorous literacy standards. Some, however, assert that the more demanding CCSS in literacy will reveal even greater achievement gaps based on economic privilege, race and gender (Haskins et al, 2012). Furthermore, unlike countries such as Australia (c.f., Alloway, Freebody, Gilbert, & Muspratt, 2002), where attempts have been made to institutionalize and then study “boy friendly” curriculum, the U.S. has nothing similar at the federal or state level to explore.

Though federal policy initiatives specifically designed to close the gender gap in reading may not exist in the U.S., small-scale efforts around the country, such as all-male book clubs (Brozo, 2010), are worth noting. Others are taking on the imposing challenge of building the literate identities of high-risk, disenfranchised male youth with culturally responsive and gender-sensitive practices (c.f., Tatum, 2005). Even if not national in scope nor systematic in nature, these actions by teachers and concerned citizens, from Alaska to Florida, along with an overall heightening of sensitivity to practices and texts that engage boys as readers may already be having a positive effect. The evidence might be in the narrowing of the achievement gap for boys on PIRLS (from 18 points in 2001 to 10 points in 2011) and PISA (from 29 points in 2000 to 25 points in 2009).

Next Steps: What We Can Learn from PISA about Closing the Reading Gender Gap

We asserted that teachers have much to gain from a close examination of PISA results. Based on findings from PISA 2009 presented in this article as well as what we know about our own national responses to differences between the genders in reading achievement and

engagement, we offer the following five guidelines we believe can give direction to adolescent literacy policy and practice concerned with elevating boys' reading literacy competencies.

1. ***Support wide and regular reading of a variety of texts related to boys' individual interests.*** PISA results indicate that students who read fiction, nonfiction, magazines, newspapers, and other traditional and electronic print sources have the highest levels of engagement and achievement. Boys need exposure and opportunities to read a range of texts on topics of interest. For example, when studying a topic in U.S. history, the textbook can be surrounded by primary documents, graphic novels, information books, websites, etc.
2. ***Support boys' use of digital texts and alternative media.*** Although among our five countries, only Ireland and Korea participated in the digital reading version of PISA 2009, the finding for those two countries is consistent with findings overall that show the gap is narrower between boys and girls with this form of reading. Boys' interest in new media and relative successes with digital texts could be exploited to sustain effort for and build literacy skills with academic texts and tasks (Newkirk, 2006).
3. ***Involve fathers and other adult male role models in programs for boys.*** PISA data for the U.S. yield a positive relationship between student performance and the presence of a father in the home (NCES, 2011). Furthermore, evidence from research on role models suggests the most productive and promising results emerge when mentor and mentee are matched by gender and culture (Zirkel, 2002). Efforts like those in Germany that encourage fathers to read to their children and book clubs for boys led by male teachers and involving other adult males (Brozo, 2010) deserve attention.

4. ***Focus on practices for boys that promote reading engagement.*** As we have stressed, the variable of engagement has one of the most robust associations with reading literacy achievement on PISA. And because boys who are engaged readers can make up for risk factors in their lives (OECD, 2010), ensuring instructional practices emphasize gaining and maintaining boys' motivation to read and learn should be a constant goal (Guthrie, 2008). This focus is more important than ever in an era of Common Core, which has been faulted for failing to account for motivational aspects of reading (Robb, 2013). Critical literacy practices, like those recommended in Ireland, that support boys' exploration of narratives of masculinity and how they are defined by media and popular culture may be an important way to engage adolescent males.
5. ***Set priorities for addressing the literacy needs of boys.*** When PISA data within countries are disaggregated by race, immigrant status, and socioeconomic level, it becomes clear which boys are most vulnerable. In the U.S., for example, African-American and Hispanic boys, and boys from lower SES categories exhibit the lowest reading literacy achievement. Targeting resources and efforts to maximize support for these neediest groups of male youth could significantly impact their personal and economic well-being (Author, 2010).

Take Action

Here are four ways of becoming more informed about PISA.

1. Go to the IRA website for reports, PowerPoint slides, and presentations from the PISA/PIRLS Task Force members:
<http://www.reading.org/General/CurrentResearch/Reports/PISAReport.aspx>
2. Learn how your state fared by locating it within states divided into four broad categories

comparing performance of public schools in the United States (see the OECD report *Strong Performers and Successful Reformers in Education: Lessons from PISA for the United States* (<http://www.oecd.org/pisa/46623978.pdf>

3. Explore the report *Globally Challenged: Are U.S. Students Ready to Compete* (http://www.hks.harvard.edu/pepg/PDF/Papers/PEPG11-03_GloballyChallenged.pdf), to find approximated percentages of students achieving at the proficient level in reading for all 50 states and the District of Columbia with comparisons to other countries with similar achievement levels.
4. To access and critique actual test items from PISA 2009, go to:
<http://browse.oecdbookshop.org/oecd/pdfs/free/9809051e.pdf>

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