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Engagement in reading: Lessons learned from three PISA countries

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Although the Program for International Student Assessment (PISA) is not well known in the United States, findings from this study offer valuable information on reading engagement and provide lessons for instruction and policy.

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In 2000, and again in 2003, thousands of American youth took part in an international assessment of reading literacy. Can you name the assessment? If the Program for International Student Assessment (PISA) doesn't spring to mind, you're not alone. Few university and fewer public school educators in the United States know about this assessment. But they should. Did you know, for instance, that results of the PISA place white students in the United States second on the reading literacy scale among the 32 participating countries but that African American and Latino American students rank 25th? If we ever hope to institute the most effective curricular and policy reforms in our schools that close achievement gaps and produce wise, literate consumers and global citizens, we should be asking important questions about PISA. These include, What are the main characteristics of educational systems that produce uniformly high achievement? Which variables have the most significant impact on reading performance?

This last question is taken up in this article. We begin by describing our roles in a special International Reading Association (IRA) task force charged with analyzing cross-national literacy studies. This is followed by a description of PISA's global effort to assess reading literacy. We then focus on the variable of engagement, described by PISA researchers (Kirsch et al., 2002) as the "student characteristic [that] has the largest correlation with achievement in reading literacy" (p. 124). Next, salient findings related to engagement from three English-speaking PISA countries, the United States, the United Kingdom (including England, Wales, Northern Irland, and Scotland), and the Republic of Ireland, are presented. (Unless otherwise stated, data are drawn from PISA 2000, in which reading literacy was the major assessment domain and received more emphasis than the other assessed domains—mathematics and science.) We conclude with a discussion of lessons about reading engagement, derived from findings common to our three nations, with implications for policy and practice.

The PISA/PIRLS Task Force

We became formally involved in seeking answers to questions about international reading literacy studies when in 2003 the Board of Directors of IRA invited us to join a newly constituted task force. Our charge was to analyze the findings of

cross-national testing efforts and propose policy and practice recommendations based on those findings. In the three years since its formation, the task force has been promoting forums for dialog on global patterns of reading literacy achievement for youth and their implications for researchers, practitioners, and policymakers within and across participating countries.

The task force produced a report, *Policy and Practice Implications of the Program for International Student Assessment (PISA) 2000* (www.reading.org/downloads/resources/pisa.pdf), for the IRA board in the spring of 2003. Subsequent to that report, the association, supported by its International Development Committee in Europe, convened a meeting in Linkoping, Sweden, bringing together representatives from 23 PISA nations. The representatives consulted with the task force to inform the development of a suite of PowerPoint presentations (www.reading.org/resources/issues/reports/pisa.html). The purpose of the PowerPoint presentations is to promote sound and productive use of the international reading assessment results. IRA members from around the world are urged to use these materials to engage stakeholders in critical conversation about issues and directions for adolescent literacy, influence national literacy policy, reform state language curricula, and craft responsive professional development programs. Some of these applications have already been documented.

Task force members have also participated in symposia at IRA's annual convention and European reading conferences in which reading literacy trends and findings from PISA were further discussed and critiqued.

While the task force has fulfilled its immediate charge, there is the realization among its members that greater efforts are needed to achieve the goal of raising the level of awareness of the significance of PISA among U.S. educators. Although American teachers typically have a great deal of familiarity with their own state-level literacy assessments and, to a lesser extent, the National Assessment of Educational Progress reading results, they tend to be less well informed about and overlook the relevance of PISA and other global literacy studies.

So, why should teachers in the United States care about the results of PISA? One reason is that American teachers can gain much from becoming knowledgeable about its key findings and even more from the lessons learned by educators from other nations who have turned that knowledge 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 will better prepare them for the new global economy. 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. The findings of PISA in the area of reading engagement provide a common focus for curricular and policy reform that could lead to increases in student achievement.

Reading literacy in PISA

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 is forward looking, focusing on young people's 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. This orientation reflects a change in the goals and objectives of curricula themselves, which are increasingly concerned with what students can do with what they learn at school and not merely whether they can reproduce what they have learned.

The concept of "literacy" used in PISA is concerned with the capacity of students to apply knowledge and skills and to analyze, reason, and communicate effectively as they pose, solve, and interpret problems in a variety of situations. This conception of literacy is clearly a much broader one than the historical notion of the ability to read and write. Moreover, it is measured on a continuum—not as something that an individual

either does or does not have. It may be necessary or desirable for some purposes to define a point on a literacy continuum below which levels of competence are considered inadequate, but the underlying variability is also important.

PISA's definition of reading is

> the capacity to identify and understand the role that reading plays in the world, to make well-founded judgments and to use and engage with reading in ways that meet the needs of that individual's life as a constructive, concerned and reflective citizen. (Organisation for Economic Co-operation and Development [OECD], 2003, p 108)

Reading materials take a variety of forms including continuous texts such as narration, exposition, and argumentation and noncontinuous texts such as graphs, forms, and lists. The types of reading tasks that students are asked to perform include

- Retrieving information by locating one or more pieces of discrete information in a text and forming a broad general understanding
- Developing an interpretation by constructing meaning and drawing inferences using information from one or more parts of the text
- Reflecting on the content and structure of texts by relating the text to one's own experiences, knowledge, and ideas and critically evaluating ideas

The focus of PISA is on reading to learn, rather than on learning to read, and students are assessed on these higher order skills. Reading tasks are set in four real-life contexts: private (e.g., a personal letter), public (e.g., an official document), occupational (e.g., a report), and educational (e.g., school-related reading).

PISA is an assessment of 15-year-olds and includes students at different grade levels, educational institutions, and program types. In each country, schools are selected at random, and, within each selected school, up to 35 students are also selected at random to participate. In most countries, about 5,000 students take part. Although these students may represent several grade levels (depending on the organization of the education systems they represent), the majority come from grade 9. In addition to completing tests of reading, the students complete a questionnaire that seeks information about their backgrounds, their reading habits and practices, and their use of technology.

PISA 2000 revealed wide differences in the extent to which countries succeed in enabling young adults to access, manage, integrate, evaluate, and reflect on written information in order to develop their potential and further expand their horizons. For some countries, the results were disappointing, with 15-year-olds lagging considerably behind their counterparts in other countries—sometimes by the equivalent of several years of schooling and sometimes despite high investments in education. The data also highlighted significant variation in the performance of schools and raised concerns about equity in the distribution of learning opportunities.

In both 2000 and 2003, Finland was the highest scoring country in reading, with Canada, New Zealand, Australia, Ireland, Korea, the United Kingdom, Japan, and Sweden also doing well. In both years, students in the United States achieved overall average scores that placed them in the middle of the distributions of participating countries. The fact that a country achieves a high ranking in PISA does not, of course, imply that the country's youth do not have reading difficulties or that student motivation to read is uniformly high. Rather, it indicates that a country has performed well relative to other countries in the study.

Reading engagement

One variable that has received well-deserved attention in the analysis of PISA findings is reading

engagement. PISA defines reading engagement as the time that students report reading a diversity of material for pleasure and their interest in and attitudes toward reading. Figure 1 summarizes the components of engagement in reading. Students' responses on each component were combined to create an index of engagement.

Engagement has been found to be a critical variable in reading achievement. For example, Stanovich (1986) described a circular association between reading practices and achievement. Better readers tend to read more because they are more motivated to read, which, in turn, leads to improved vocabulary and comprehension skills. Poor readers, however, who may avoid reading, experience an ever-increasing decline in skill level. Thus, the achievement gap between those who read frequently and those who are reading averse increases over time. Guthrie and Wigfield (2000) took the point further when they noted that: "As students become engaged readers, they provide themselves with self-generated learning opportunities that are equivalent to several years of education. Engagement in reading may substantially compensate for low family income and poor educational background" (p. 404).

Reading engagement is also important to the maintenance and further development of reading skills beyond the age of 15. The International Adult Literacy Survey found that reading skills can deteriorate after the completion of initial education if they are not used (OECD & Statistics Canada, 1995). Engagement in reading is thus a predictor of learning success throughout life.

Over the past two decades, volumes have been written about reading motivation and engagement and countless workshops and conference presentations have been devoted to the topic. Yet, teachers feel they need more information and strategies to motivate students to read (Gambrell, 1996; O'Flahavan, Gambrell, Guthrie, Stahl, & Alvermann, 1992)—and there is evidence that justifies this need. A well-documented slump in achievement and motivation occurs during the upper elementary and middle school years (Anderman, Maehr, & Midgley, 1999; Cummins, 2001; RAND Reading Study Group, 2002). Curiously, this phenomenon is not restricted to a particular country or region of the world. Youth from across the globe exhibit a similar decline in performance and interest as they move from primary to secondary school (Brozo, 2005; Brozo & Simpson, 2007).

Figure 1
Components of engagement in reading in PISA

- Diversity of reading—the frequency with which students reported reading six types of text (magazines, comics, fiction books, nonfiction books, e-mail, and webpages)
- Frequency of leisure reading—the frequency with which students engaged in leisure reading on a daily basis
- Attitude toward reading—the extent to which students' agreed with statements such as "I read only if I have to," "Reading is one of my favorite hobbies," and "I cannot sit still and read for more than a few minutes"

Evidence for the benefits of engaged learning is quite compelling. We know from the National Assessment of Educational Progress (NAEP) that adolescents who identified themselves as being interested in reading not only achieved better scores on the NAEP but also had better high school grade-point averages than their less interested peers (Donahue, Daane, & Grigg, 2003).

Even more convincing are data derived from PISA itself. PISA youth from the lowest socioeconomic status (SES) who were highly engaged readers performed as well on the assessment as highly engaged youth from the middle SES group and youth with medium levels

of engagement in the high SES group (Kirsch et al., 2002). Using regression analysis, it was found that engagement in reading was the student factor with the third largest impact on performance (after grade and immigration status). It accounted for twice as much of the difference in performance as SES. What this suggests is that highly motivated youth may compensate for low family income and parents' limited educational attainment—two prominent risk factors in the lives of adolescents. Keeping students engaged in reading and learning might make it possible for them to overcome what might otherwise be insuperable barriers to academic success.

PISA also confirms the gendered relationship between reading engagement and achievement. In all countries, females viewed reading more positively, read more often, and outperformed males in reading (Kirsch et al., 2002). In a similar manner, females tended to read long texts (e.g., novels) for enjoyment while males preferred to read shorter texts that were more likely to provide information (e.g., newspapers, comics, e-mail, and webpages). Nevertheless, in a few countries, including Finland and Japan, daily engagement in reading magazines, newspapers, and comics was associated with proficient reading. However, based on school reporting, the use of fiction was much more widespread than nonfiction as the source material for teaching reading in nearly every country.

Students' engagement in reading varied widely between countries. Some countries with above average reading performance showed comparatively low engagement in reading. Nonetheless, in virtually every country, there was a clear association between engagement in reading and performance. Higher engagement in reading was consistently correlated with higher reading achievement.

At the individual student level in PISA, the majority of the least capable students were in the low SES group. However, time spent reading was also associated with the gap between good and poor readers, regardless of SES. Indeed, regression analysis showed that much of this disparity was accounted for by differences in the amount of actual engagement in reading and not by SES status. Clearly, the motivation to read contributes to this finding.

As mentioned, females outperformed males on reading in all participating countries. They also spent much more time reading for enjoyment than did males. The gap in performance between boys and girls in reading literacy can largely be explained by differences in engagement in reading. However, males who showed a high level of reading engagement tended to outperform those females who showed a low level of engagement.

Diversity of reading

As indicated in Figure 1, diversity of reading was a component of engagement in reading in PISA. A statistical technique called cluster analysis was used to identify four groups of readers (see Figure 2).

Across OECD countries in PISA 2000, 22% of readers were categorized as diversified in longer texts, 28% as diversified readers in shorter texts, 27% as moderately diversified, and 22% as least diversified readers. On average, across countries, students diversified in longer texts had higher reading achievement than diversified readers of shorter texts. Both groups outperformed moderately diversified readers. Those readers categorized as least diversified performed least well on reading.

Reading engagement in the United States

American youths' overall level of reading engagement was a good predictor of their rankings on other dimensions of PISA. For example, American teens placed 20th among the 32 participating countries on engagement in reading and even lower (24th) in the proportion who were identified as diversified readers of books. At the same

time, they reached only 15th in their ability to interpret and retrieve information from text. This was the lowest ranking of the primarily English speaking countries surveyed.

Other significant findings from the PISA studies revealed that only 40% of American youth could be classified as diversified readers, compared to an OECD average of over 50%. It is worrying that just one quarter of U.S. students were classified as diverse readers of long and complex texts, compared with 39% in New Zealand, 36% in Australia, 35% in the UK, and 28% in Ireland. As noted, diversity of content reading was one of three key indicators of reading engagement and achievement. Fifteen-year-olds who read a variety of print materials were more proficient in reading than those reading a limited set of print sources. The study also showed that access to reading materials at home had a greater impact on reading engagement than socioeconomic status. American 15-year-olds reporting a limited number of books at home were, on average, less engaged in reading.

Consistent with overall trends in engagement on PISA, American 15-year-olds who were highly engaged in reading but whose parents had the lowest occupational status and limited income achieved better reading scores than students who were poorly engaged in reading but whose parents had high or medium occupational status.

In all countries participating in PISA 2000, females had superior reading achievement, and they were also more engaged readers than males. American boys' reading engagement levels were well below the PISA average while girls' were slightly above the average for participating countries.

Reading engagement in the United Kingdom

The United Kingdom performed quite well in reading in PISA 2000, scoring seventh place out of 32 countries. This was similar to Korea and only slightly behind Ireland and Australia. There were indications that weaker readers, those scoring below the 25th percentile, had a larger than average effect on keeping the score down. Students scored high on reflection and evaluation, middle on retrieving information, and low on interpreting texts. Higher performance on noncontinuous than continuous texts was evident, but readers also scored highly on diversified reading of long and complex texts.

Nonetheless, the level of engagement in reading was not high for UK students. Overall mean reading engagement levels were well below those of the Nordic countries and even less than countries such as Greece and Poland. Females scored only slightly above the OECD reading engagement average, and males scored below it (though not so far below as males in Ireland). In all countries males scored lower than females, but in some countries the gap between males and females is less than in others. However, this is not a

Figure 2
PISA classification of readers by frequency of reading diverse texts

- Diversified readers of long texts (students are frequent readers of magazines, fiction, nonfiction, and newspapers)
- Diversified readers of short texts (students are frequent readers of magazines, comics, and newspapers but read fiction and nonfiction texts less frequently)
- Moderately diversified readers (students read magazines and newspapers frequently, and fiction, nonfiction, and comics infrequently)
- Least diversified readers (students read magazines with moderate frequency and other text types infrequently despite the availability of fiction and nonfiction texts in instructional settings)

good result for the UK, and it goes against the trend for reading engagement and overall performance to be positively aligned.

The UK does well in performance at reading, particularly on reflection and evaluation and on diversified reading of long texts, but reading engagement is poor. This does not bode well for the future—especially for those males whose reading engagement is low.

Reading engagement in the Republic of Ireland

Fifteen-year-olds in Ireland did well overall on PISA reading literacy (a ranking of 5th in 2000 and 6th in 2003). Moreover, performance on the evaluation scale in 2000 was not significantly different from Canada—the highest scoring country on that scale. While achievement differences in favor of females in Ireland were found on all reading scales, differences were considerably greater on continuous texts than on noncontinuous texts—a finding that was seen in most countries and one that may have implications for addressing gender differences between males and females.

Table 1
Percentages and performance of students in Ireland reading for leisure with varying frequencies

Daily reading	Percent of students	Mean reading score
No time	33	491
30 minutes or less	31	536
Between 30 and 60 minutes	20	558
60 minutes or more	15	552

Note. The overall mean reading score for Ireland was 516 with a minimum score of 129 and a maximum of 771.

Large gender differences are also evident in the reading engagement of students in Ireland. Ireland ranked fourth from bottom on this measure with only Spain, Germany, and Belgium having lower average engagement scores. Moreover, male students in Ireland had the third lowest average engagement in reading score among OECD countries (only males in Germany and Belgium had lower scores). Like their counterparts in the UK and the United States, Irish female students' level of engagement was close to the OECD average level for females.

Quite naturally, these engagement outcomes have caused concern in Ireland. First, there is a relatively strong association between frequency of reading on a daily basis and reading achievement (Table 1). One third of students reported that they do not engage in any leisure reading on a typical school day, while 31% are involved in reading for 30 minutes or less. The table shows that as the frequency of reading increases average reading scores also increase (Shiel, Cosgrove, Sofroniou, & Kelly, 2001).

Second, attitude toward reading (a component of engagement) is associated with reading achievement. Students in Ireland with a weak attitude (those in the bottom one third of the distribution of attitude scores) achieved a mean reading score of 486, which was significantly lower than the mean score of those with average attitude (the middle third). These students, in turn, achieved a mean score of 521, which was significantly lower than that of students with a strong attitude (the top third) who had a mean score of 583.

Third, although 28% of readers in Ireland (20% of males and 36% of females) were categorized as diversified readers of longer texts, large proportions were classified as least diversified readers (16% of males and 17% of females) and moderately diversified (54% of males and 41% of females). Moreover, more students in Ireland were in these two low-frequency categories (63%) than the corresponding country average (49%). Despite relatively high standards (perhaps reflect-

ing links between PISA and state examinations of English in Ireland), Irish teenagers reported reading relatively infrequently and many read a narrow range of texts in their leisure time.

The observation that attitude toward reading, frequency of leisure reading, and diversity of materials read are associated with achievement does not, of course, indicate a singular causal association between these constructs and reading. We cannot say that frequent reading causes high reading scores or that holding a positive attitude is why good readers read well. It may be that some students read more often because they are good at reading and that they are positively disposed to reading because they are successful at it. However, a multilevel model of reading developed using PISA data for Ireland (Shiel et al., 2001) confirmed that frequency of reading and attitude to reading made significant contributions to students' reading scores after controlling for variables such as average school status, SES (parent wealth), number of books in the student's home (a proxy for home-educational processes), and home-educational resources (a dictionary, textbooks, a quite place to study).

Of course, some students in Ireland may be so busy reading coursework and studying for the state examinations that they are required to take at the end of grade 9 that they have little or no time for leisure reading. However, when asked in PISA 2003 how often they engaged in reading various types of texts in school or as part of homework, 13% reported that they hardly ever or never read fiction and 21% that they hardly ever or never read nonfiction (Shiel, 2006). It does not appear that students in Ireland are reading electronic texts in lieu of "paper" texts. In PISA 2003, students in Ireland reported comparatively low usage of computers at home or at school for a range of purposes (OECD, 2005). In Ireland, just 24% of students reported using a computer frequently (at least a few times a week) in school, compared to 71% in the UK and 43% in the United States. Sixty-one percent of students in Ireland reported frequent use of a computer at home, compared to 81% in the UK and 83% in the United States.

Shared lessons

In this final section, we take a broad look at key PISA findings on reading engagement for our three countries and extract lessons for instruction and policy. It is our hope these lessons will be especially helpful to educators and policymakers in the United States where renewed interest in adolescent literacy is leading many states to revise high school reading and language arts standards and implement significant secondary curricular reforms (Biancarosa & Snow, 2004). Although these lessons echo admonishments that have appeared before, we believe they are not receiving the kind of attention they deserve in secondary schools, particularly those in the United States.

Increasing time spent reading. Within secondary schools, it is known that there are few contexts for sustained reading (Brozo & Simpson, 2007). What reading students do tends to be textbook based. PISA estimates the ability to use reading to meet the challenges of the world of work and life beyond school. But there might be little in youths' school experience that is relevant to this wider purpose. What can be done to narrow the gap between school-based reading and the literacy demands of the outside world?

First, there needs to be an increase in time allocated to personalized reading. Students involved in public examinations might feel they have little time for reading anything except material associated with that task. This is short-term instrumental reading. By contrast, personalized reading differs from student to student, linking with their personal interests, and is likely to have an effect over a longer time (Lonsdale, 2003). Allocating time in a crowded curriculum to personalized reading might seem challenging, but many secondary schools in each of our countries are beginning to contemplate such moves.

Second, a system of accounting for reading should be used. Simply increasing time allocated to personalized reading might produce some positive results, but we need to ensure that student are benefiting from sustained print encounters. As a consequence, a system for evaluating whether the student has read a self-chosen book carefully with attention to comprehension is needed. Fortunately, such systems are increasingly available, but they do need follow-up by teachers if they are to have effects across the ability spectrum. Such accounting systems should harvest the results of time spent reading wherever it occurs—school, home, or elsewhere.

Third, engagement purposes beyond the school should be promoted (Guthrie & Davis, 2003). Projects that start inside and go outside the school gates are a start, but the goal should be to develop students' literacy abilities that lead to independence and competence with activities and tasks in everyday life. For many students, the school is useful in terms of access to literacy resources such as books and computers, which they should be encouraged to use for real-world purposes.

Increasing engagement for boys. Boys underperformed in reading relative to girls in every PISA country. Across the board, boys were also found to have lower levels of reading engagement than girls. In some countries, such as the United States, the difference in engagement between boys and girls was wide. PISA evidence strongly suggests that engagement is a key factor in boys' reading performance.

PISA itself offers some promising directions for raising reading engagement for male youth. For example, it was observed that boys were more motivated to read and achieved higher scores with noncontinuous text. This was true for all three of our countries. Making available to boys opportunities to use alternative texts as sources of information and pleasure may sustain their interests, build knowledge, and lead to exploring more traditional print materials once their imaginations have been captured.

Creating these kinds of options for boys will be challenging, because we know in typical upper grades classrooms today the core textbook is the designated and authoritative information source (Brozo, 2002). Yet, youth today have access to and facility with a wide array of richly informative print and multimedia sources.

Consider the new possibilities for increasing boys' reading engagement with comic books and graphic novels. These texts have been shown to be an invaluable tool for motivating reluctant readers (Frey & Fisher, 2004; Schwarz, 2002). The illustrations can provide the needed contextual clues to the meaning of the written narrative, especially for struggling and visual learners. And though librarians have shunned these materials in the past, many teachers are observing how graphic novels are generating a whole new energy among youth.

Of course, the most pervasive noncontinuous textual medium in male youths' lives is the computer. On PISA, boys reported a particular preference for computer-based displays of information. In spite of the omnipresence of technology in schools and the everyday lives of boys, secondary teachers may not be tapping into its educational benefits (Songer, Lee, & Kam, 2002). Practices for critically reading and writing using electronic texts are not as widespread in school as they should be (Pailliotet, Semali, Rodenberg, Giles, & Macaul, 2000). To motivate adolescent boys to read, teachers should take advantage of computers to increase boys' engagement and depth of thinking for personally meaningful and classroom-based topics.

We believe that for boys to become sophisticated readers and writers of print it is essential they become engaged with a range of text types. Because PISA makes clear boys' preference for noncontinuous text, these sources should be made available to boys in creative and motivating contexts to help them pursue individual interests, build knowledge of academic topics, and lead to reading of more traditional print sources.

Increasing the diversity of texts that students read. Although our three countries were among those with high proportions of the most diverse readers (readers of longer fiction and nonfiction texts) in PISA, within our countries there were considerable differences in achievement between readers at different levels of diversity, with the most diverse readers performing best. It is interesting that in the UK and Ireland, but not the United States, the least diversified readers had higher achievement than diversified readers of short texts. This finding strengthens our view that all readers should be encouraged to read a diverse range of texts. Moreover, we argue that efforts to diversify the range of texts that students read should begin well before age 15 because readers' text preferences are established earlier in childhood. We know from the Progress in International Reading Literacy Study (Mullis, Martin, Gonzalez, & Kennedy, 2003, p. 268) that one third of students in grade 4 in the United States and Scotland, and one quarter in England, "hardly ever or never" read short stories or novels outside of school, and fewer than 10% in each country "hardly ever or never" read shorter texts such as magazines and newspapers.

There are a number of strategies that might be implemented to increase diversification of texts, and these should be implemented throughout students' schooling. First, parents and teachers should model reading a diverse range of texts. By viewing significant others engaged in reading-related activities with different texts, students are more likely to be positively disposed toward engaging in such activities themselves. Efforts should also be made to ensure that all students have access to a range of different text types, at appropriate levels of difficulty, both at home and at school.

Second, instruction in school settings should involve a broad variety of texts. Almost all students are required to study a range of subjects during compulsory schooling, including subjects that involve reading texts. Hence, all students should be provided with instruction in reading both shorter and longer texts in different subject areas. This recommendation implies that subject area teachers would be fully informed on how to select appropriate texts for students (whether paper or electronic), teach relevant reading skills and strategies, and check understanding and progress.

Third, the quality of classroom reading programs in the early and middle school years should ensure that students have an opportunity to make significant progress on a range of text types. Extensive practice in reading leveled texts in the early years of learning to read (Fountas & Pinnell, 2006), provision of opportunities for informed self-selection of reading materials in the context of meaningful reading activities (Guthrie & Davis, 2003), rereading of familiar texts to criterion level, and opportunities to learn and practice relevant reading strategies in meaningful contexts (Guthrie, Schafer, Von Secker, & Alban, 2000) should all be emphasized to ensure that students acquire the skills needed to read and understand a diverse range of texts as they progress through school.

Capturing and sustaining reading engagement for high-poverty students. The outcomes of PISA with respect to engagement and SES are encouraging. In particular, the finding that some high-poverty (low SES) students with high engagement achieve at a par with medium SES students with high engagement and high SES students with medium engagement is important. However, high-poverty students are underrepresented among those with high levels of engagement (Kirsch et al., 2002). This highlights the need to provide appropriate school and home experiences to low SES students to increase their engagement with reading. Many of the strategies suggested for improving the reading engagement of boys, and increasing the diversity of texts read by students, are also relevant for high-poverty students with low engagement. Again, we would strongly endorse programs designed to develop engagement in reading at an early age.

PISA also tells us that, within countries, there are differences between school in both engagement and intake (SES) levels and that both effects may operate in positive or negative ways at the same time. This means that high-poverty schools with large numbers of disengaged readers face a particular challenge—they need to raise engagement levels while also reducing the effects of high poverty levels. We suggest three strategies schools with high levels of poverty and low levels of engagement should implement. First, such schools need to ensure that a full and varied range of reading materials are available to students, including short and long texts in both paper and electronic forms. Second, school library programs that build on students' motivation and interest, and that support their learning across the curriculum, should be implemented (Lonsdale, 2003; Smith, 2001). Third, school-level programs that provide students with strategies that enable them to read with purpose and understanding, while monitoring their own learning, are also crucially important.

Finally, it seems self-evident that any gains in engagement that have been achieved should be sustained. This is a difficult task because we know that students' engagement levels drop as they move through adolescence. Therefore, intervention programs—whether designed to increase access to materials, improve motivation, or increase skill levels—should be available to students on an ongoing basis. At the same time, it is important to encourage independence and responsibility in adolescents so that they can channel their engagement levels purposively and manage their interactions with texts in strategic ways.

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