



Policy Implications

To become effective learners, students need to be able to figure out what they need to learn and how to achieve their learning goals. They also need to master a wide repertoire of cognitive and meta-cognitive information-processing strategies to be able to develop efficient ways of learning. At the same time, fostering effective ways of learning, including goal setting, strategy selection and controlling and evaluating the learning process, should not come at the expense of students' enjoyment of reading and learning, since proficiency is the result of sustained practice and dedication, both of which go hand-in-hand with high levels of motivation to read and learn.

Research has consistently shown that by being engaged in reading and developing effective approaches to learning, students can build solid foundations to become proficient readers, thus paving their path towards becoming lifelong learners. PISA's findings on the relationships between reading performance, 15-year-olds' engagement in reading, and their knowledge and use of learning strategies are consistent with this research. In all countries that took part in PISA 2009, students who perform well in reading tend to be those students who have a deep understanding of which learning strategies are most effective in attaining different learning goals while also reading a wide variety of materials for their own enjoyment.

ENGAGEMENT IN READING MATTERS

Students who make reading an everyday part of their lives are able to build their reading proficiency through practice, which in turn can improve their confidence and encourage them to become more engaged in reading. In almost every country that took part in PISA 2009, the more students enjoy reading and the more engaged they become in reading for enjoyment – both off and on line – the higher their reading proficiency. Among different reading media, reading fiction shows the strongest association with reading performance: students who read fiction regularly score about half a proficiency level above the average. However, the positive association between reading online and performance in reading print media shows that reading books or magazines is not the only way in which being a keen reader is associated with being a good reader.

PISA shows that boys and, to some extent, socio-economically disadvantaged students, tend to be less engaged in reading than girls and socio-economically advantaged students: they are less likely to read for enjoyment on a daily basis, they tend to enjoy reading less, are less likely to read fiction and are less likely to read a variety of materials. As noted before, reading widely, and particularly reading fiction, are two of the factors that are most closely associated with high performance in reading. However, even if simpler reading materials may not lead students to become highly proficient readers, they can still be used by parents and teachers to help develop a habit of reading for enjoyment. Devising a structured approach that 'entices' disengaged readers to begin with easy and interesting texts, such as those found in magazines, and then gradually introducing more complex reading tasks and texts could be one way to improve the reading performance of those groups that currently underperform in reading.

Across OECD countries, over a third of students – and large numbers of students in almost all countries and economies participating in PISA – reported that they do not read any type of material for enjoyment regularly. Research suggests that creating conditions that promote reading practice, and letting students read what they want to read, could be beneficial.



Thus, it might be useful to provide a large supply of texts and activities that could stimulate students' interest in reading, such as organising book clubs, letting students use school facilities after school hours to access material online, under the supervision of responsible adults, or incorporating into school curricula those reading materials that are favourites among students who read for enjoyment, according to PISA results, namely magazines and newspapers. In contrast, the strong link between reading fiction and high reading performance indicates that some materials may be far too complex for weak readers to grasp. Obliging poor readers to engage in material that is beyond their skills may alienate them. Therefore, efforts to promote reading practice should not only take into account differences in reading preferences among students, but also differences in students' current reading abilities.

APPROACHES TO LEARNING MATTER

PISA measures approaches to learning strategies in two ways: by examining the extent to which students report employing certain strategies, and by looking at students' awareness of which strategies work best. The latter indicator, new to PISA 2009, is a more robust measure because it also provides for an external validation of students' knowledge of what works, rather than just their preferences. Across countries, students who are better-informed about what will help them learn tend to have substantially higher reading proficiency. This applies both to an awareness of strategies to understand and remember information as well as to strategies to summarise information. The reported use of strategies to control one's learning is also associated with higher student performance in every country, although, on average, this association is not as strong as an awareness of effective learning strategies.

Research has shown that students who take responsibility for their own learning – who employ “control strategies” in which they set their own learning goals and check their own progress – are able to learn more effectively. However, given the wide variety in students' levels of understanding about which techniques work, it is clear that giving all students more autonomy will not lead to better results across the board. Weaker students in particular need to be taught how to learn effectively.

PISA shows that an awareness of effective learning strategies is closely associated with proficiency in reading. Reading a lot is not enough: students who read a lot but who do not understand how to learn effectively perform worse in reading than students who read less but understand what effective learning entails. This confirms previous research that while enjoying reading is a necessary step towards becoming a better reader, it is not sufficient if it does not go hand-in-hand with a good understanding of how to use reading to learn effectively. This underlines the importance for parents, teachers and schools to provide students with the tools to become effective readers and learners. Developing an awareness of effective learning strategies can involve letting students experiment with different approaches, discussing with students what they find helpful and unhelpful, and encouraging them to reflect on the different approaches that they use to achieve learning goals.

LEVELLING THE PLAYING FIELD MATTERS

PISA identifies large gender and socio-economic gaps in reading performance, but also separate and complementary gaps in reading habits and approaches to learning. Boys are especially likely to be less engaged in reading than girls. Similarly, students from more disadvantaged backgrounds are less likely to have the levels of engagement in reading and knowledge of learning strategies that are associated with effective reading performance.

Differences in levels of engagement in reading and approaches to learning account for about one-third of socio-economic differences in reading performance, but over two-thirds of gender differences. For example, the difference in reading enjoyment between the bottom and top quarter of students by social background is smaller than the difference between boys and girls in all countries except Australia, Belgium, Denmark, France, Ireland, Japan, Korea, the United Kingdom and the partner country and economies Shanghai-China, Singapore and Chinese Taipei. While these are the countries where reading enjoyment is most closely linked to social background, the gender difference is much larger, because it affects half the population rather than just the difference between the top and bottom quarter.

Most boys and girls in the countries that took part in PISA 2009 sit side-by-side in the same classrooms and work with similar teachers. Yet, PISA reveals that in OECD countries, boys are on average 39 points behind girls in reading, the equivalent of an average year of schooling. PISA suggests that differences in how boys and girls approach learning and how engaged they are in reading account for most of the gap in reading performance between boys and girls, so much so that this gap would be predicted to shrink by 10 score points if boys approached learning as positively as girls,

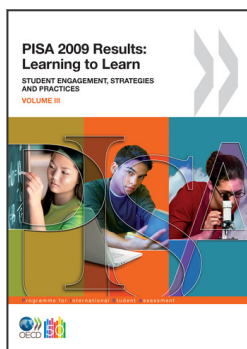


and by over 20 score points if they were as engaged in reading as girls. This does not mean that if boys' engagement and awareness of learning strategies rose by this amount, the increase would automatically translate into respective performance gains, since PISA does not measure causation. But the fact that most of the gender gap can be explained by boys being less engaged, and less engaged students having lower performance, is a good reason to look hard for more effective ways of increasing boys' interest in reading at school or at home.

PISA reveals that, although girls have higher mean reading performance, enjoy reading more and are more aware of effective strategies to summarise information than boys, differences within genders are far greater than those between the genders. Moreover, the size of the gender gap varies considerably across countries, suggesting that boys and girls do not have inherently different interests and academic strengths, but that these are mostly acquired and socially induced. The large gender gap in reading is not a mystery: it can be attributed to differences that have been identified in the attitudes and behaviours of boys and girls.

Volume V of this report, *Learning Trends*, reveals how the gender gap in reading engagement has widened in recent years, as has the gender gap in reading performance. But changing students' attitudes and behaviours may be inherently more difficult than providing equal access to high quality teachers and schools, two of the factors that explain the low performance of socio-economically disadvantaged students – an area where PISA shows that over the past decade, some countries have achieved significant progress. In the short term, this may require catering to boys' reading preferences, such as their relatively strong interest in reading newspapers and reading online, rather than designing a single model of engagement in reading. Over the longer term, shrinking the gender gap in reading performance will require the concerted effort of parents, teachers and society at large to change the stereotyped notions of what boys and girls excel in doing and what they enjoy doing.

Socio-economic disparities in engagement in reading and the use of effective learning strategies are smaller than gender differences. Nevertheless, if all students approached learning as positively as the quarter of students with the greatest socio-economic advantage, there could be large gains in their reading proficiency, especially among the least-advantaged students.



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