WHAT PISA TELLS US ABOUT THE ENVIRONMENTAL AWARENESS AND OPTIMISM OF 15-YEAR-OLDS IN OECD COUNTRIES

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The Programme for International Student Assessment (PISA) tests the extent to which 15-year-old students, near the end of their compulsory education, have acquired key knowledge and skills that are essential for full participation in modern societies. The assessment examines how well students can apply their knowledge and skills in unfamiliar settings, both in and outside of school. In addition to the assessments in reading, mathematics, science and innovative domains, PISA asks students, school principals, parents and teachers to complete a background questionnaire. Students and parents answered questions about the environment in PISA 2006 and 2015 cycles.

As part of PISA, students were asked how informed they are about seven environmental issues: the increase of greenhouse gases in the atmosphere, the use of genetically modified organisms, nuclear waste, the consequences of clearing forests for other land use, air pollution, the extinction of plants and animals, and water shortage. On average in 2015, across the OECD countries, the share of students who reported that they are informed (“I know something about this and could explain the general issue”) or well-informed (“I am familiar with this and I would be able to explain this well”) was the highest for air pollution (83 percent) and the extinction of plants and animals (79 percent), and lowest for the use of genetically modified organisms (42 percent). Despite global efforts to address global warming, such as the Paris Climate Conference and agreement, only 64 percent of students who reported that they are informed or well-informed about the increase of greenhouse gases in the atmosphere rose from 57 percent in 2006 to 64 percent in 2015, and a similar percentage-point increase was observed when students were asked about the use of genetically modified organisms.

However, students are not much more optimistic about the environment today than they were a decade ago. Across OECD countries, the share of students who are optimistic about the fate of the planet – those who reported that the problems associated with environmental issues would get better over the next 20 years – remained relatively stable. In 2015, 15-year-olds were slightly more optimistic than their counterparts in 2006 about the problems associated with the clearing of forests, nuclear waste and air pollution, but more pessimistic about the availability of water in the future.

That a greater awareness has not led to greater optimism is hardly surprising given that students who reported being knowledgeable about environmental issues were considerably more likely to consider that these problems would get worse in the future. For instance, 15-year-old students who claimed to be informed about the increase of greenhouse gases, water shortages and air pollution were about 40 percent more likely to believe that these problems would worsen over the next 20 years.

While teenagers are not becoming more environmentally
optimistic, they are more optimistic than their parents, at least in the majority of the countries/economies that distributed the PISA parent questionnaire. In all but three of these 15 countries/economies, PISA data show that students were more optimistic than their parents about people’s ability to solve problems related to five major environmental issues. Only in Hong Kong (China) and Macao (China), students were more pessimistic than their parents about the environmental outlook over the following 20 years.

Environmental awareness and optimism is in many ways affected by the characteristics of students and schools. For instance, scientifically-minded students – that is, high-performing students who participate in science activities, expect to pursue a career in science and are interested in broad science topics – and those in schools offering science activities showed greater environmental awareness. For its part, boys were more optimistic than girls about the environment, and high-achieving students more pessimistic than low-achievers. The number of science activities in which students participate and their exposure to enquiry-based teaching were also positively related to environmental optimism.

Most people agree that the environment has deteriorated over the past few decades, even if there is an ongoing debate about the magnitude and consequences of this degradation. Fortunately, there are plenty of public and private initiatives to protect the environment, and students around the globe are increasingly aware of the most important environmental problems affecting the planet today. If we want to preserve the environment for future generations, it is essential that students become more aware of the threats to the environment and use this knowledge to adopt sustainable lifestyles, that we lower the cost of action and search for innovative solutions to environmental problems.

References