




Teaching in Focus #44

Teaching for
climate action



Teaching & Learning

Teaching for climate action

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- Education has a unique role to play in building a greener future. Our future societies, habits and behaviours, and ways of living, all take root in the classrooms of today.
 - Teachers are key to changes in climate education. Transforming how future generations think and act about the environment and the world requires profound changes in teaching and learning.
 - From July 2021 to December 2021, the OECD, UNESCO and Education International ran a joint initiative to gather teacher insights on what makes a difference in student agency to act and lead on climate matters.
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What is the Global Teaching InSights?

The Global Teaching InSights (GTI) is a digital platform with classroom videos that facilitates a unique dialogue on teaching and learning across borders. The GTI provides teachers, school leaders, teacher educators, researchers and policy makers with:

- **Quality Teaching Practices:** Over 50 classroom videos showing what key teaching practices, such as higher-order questioning and feedback, look like in different contexts.
- **Observation Masterclasses:** In-depth, timestamped analysis of common problems of practice in mathematics teaching developed by international researchers and teachers to provide opportunities for professional reflection and sharing of expertise to collectively improve mathematics teaching.
- **Innovations in Teaching:** Curated practices openly sourced from teachers and school leaders to capture the tacit expertise underpinning key issues of policy and practice. Examples include teaching during COVID-19 to keep learning going, as well as offering social-emotional support, and teaching for climate action.

Re-imagining climate education

Teachers play a crucial role in our response to the global climate crisis. But how can teachers help all learners develop the knowledge, skills, values and attitudes that will enable them to exercise agency and take individual and collective climate action?

From July 2021 to December 2021, the OECD, UNESCO and Education International ran the Teaching for Climate Action Initiative. It gathered teacher expertise on promoting student agency and helping students act and lead on climate matters. Overall, about 850 teachers from 157 countries shared their climate initiatives and participated in five global dialogues on teaching for climate action together with their peers, teacher educators, school leaders, organisations and climate experts. The main highlights of the Teaching for Climate Action Initiative are presented here.

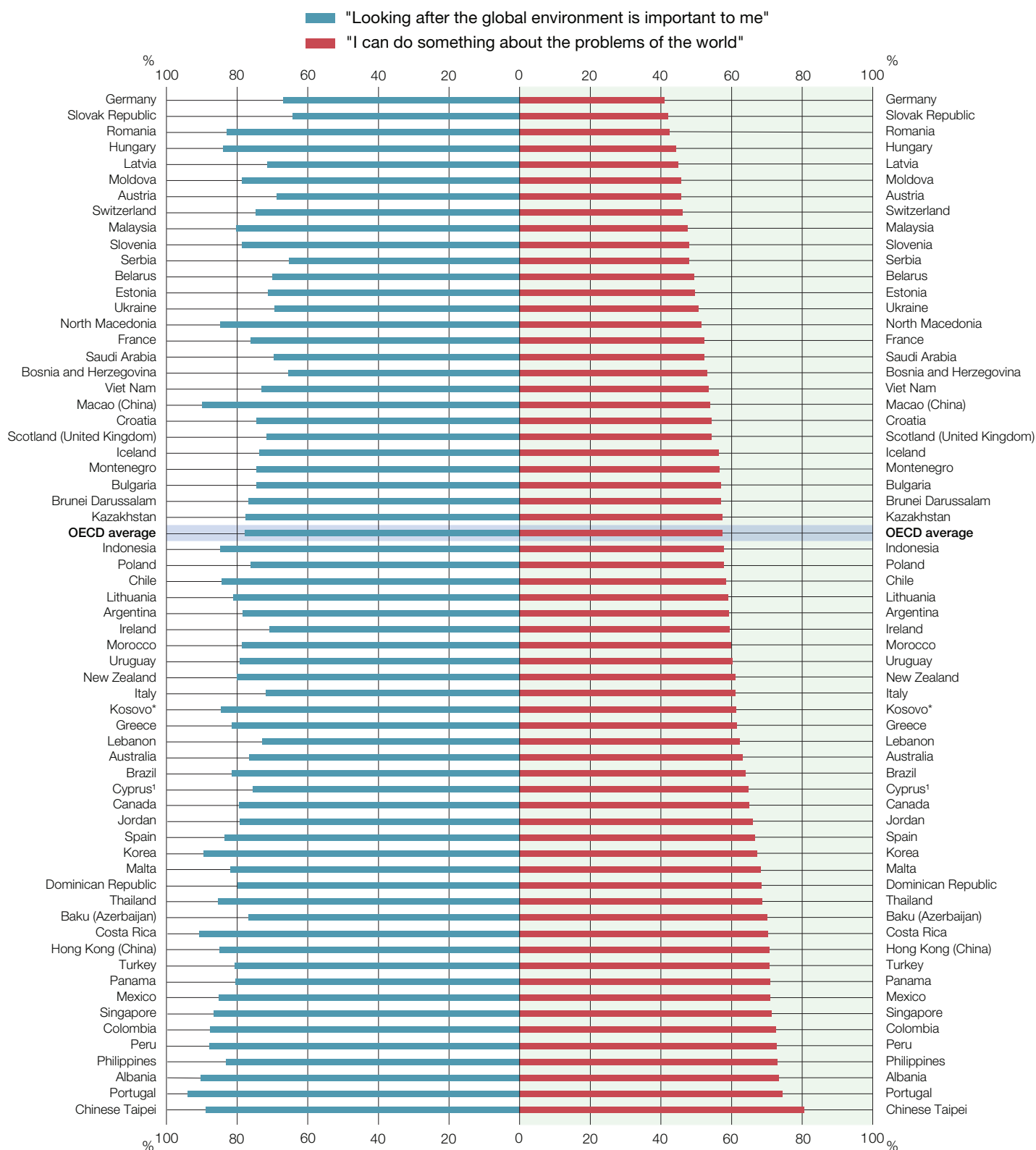
Fostering student agency

The main focus of climate education has traditionally been limited to climate literacy. Building foundational scientific knowledge helps students to: develop a deeper understanding of the causes and consequences of climate change; know how to assess scientifically credible information; communicate about climate issues in a meaningful way to others; and make informed and responsible decisions about climate-related actions.

However, building knowledge alone might not lead to significant changes in students' behaviours, attitudes and mindsets on climate matters. Participating teachers agreed on the need to go beyond climate literacy to foster student awareness, agency and empowerment for climate action. This is in line with findings from PISA 2015. About nine out of ten students (88%) across OECD countries were in schools where climate change and global warming are topics

in the formal curriculum. While eight out of ten (78%) students reported that “looking after the global environment” was important to them, only an average of 57% reported feeling empowered to do something about global problems like climate change (Figure 1).

Figure 1. Young people care about climate change but feel unable to make a difference
Percentage of students who agree or strongly agree



* and 1 - see notes on p. 6.

Source: Schleicher, A. (2021), “Green at fifteen: What schools can do to support the climate”, OECD Education and Skills Today blog, <https://oecdeditoday.com/green-at-fifteen-schools-support-climate/>.

Rethinking traditional teaching methods

Fostering student agency on climate matters requires rethinking and re-evaluation of pedagogical approaches and learning environments in many classrooms. When teachers were asked about which pedagogies they believed were most effective in empowering students for action, they agreed on active and student-centred approaches. These take a variety of forms, including experiential, enquiry-based, service-based and embodied pedagogies. Common instructional elements in the insights gathered from teachers included:

- unleashing student creativity to problem-solve collaboratively and individually, finding solutions from different angles to local problems
- highlighting authentic learning that makes links to the real world
- grounding instruction in what is most relevant and personally meaningful to students and wider communities
- enabling students to shape learning trajectories and take ownership of learning.

For example, Ana Piñero, a teacher from Spain, empowered her students for climate action using enquiry-based and embodied pedagogies to develop solutions for global waste caused by the pandemic (Figure 2).

Figure 2. Insight from Ana Piñero, Teacher



The video footage of this insight can be seen from: https://bit.ly/GTI_Ana

Despite the complexity, interconnectedness and multidimensionality of climate issues, teaching and learning about them have traditionally been confined to single subjects, such as science and geography, and to certain student age groups, mostly lower and upper secondary students. However, four out of five (79%) participating teachers agreed that climate education can be taught in different grades and subject areas.

In Figure 3, Nita Seng, a teacher from the United States, demonstrates teaching climate change and food justice through the lens of mathematics, using fractions, ratios and decimals.

Figure 3. Insight from Nita Seng, Maths Teacher, United States



The video footage of this insight can be seen from: https://bit.ly/GTI_Nita

Furthermore, the multidimensional and interdisciplinary nature of climate change requires students to exercise a range of skills and competencies that are hard to develop in a single subject area. Some teachers argued that the most appropriate approach to nurturing these critical skills and attitudes in students is interdisciplinary. This could help develop a more comprehensive and nuanced understanding of climate change.

Supporting and enhancing teaching for climate action

Embracing innovative and more student-centred teaching methods might be challenging for many teachers. Participating teachers reported having few opportunities to learn about climate matters and active pedagogies; having overloaded curricula with limited flexibility and time for lesson planning; and the absence of strong support for professional exchange and collaboration at the school level and beyond.

School leaders can play an important role in supporting teachers and building a shared vision for implementing climate education in schools. Participating teachers reported that school leaders can help mobilise and allocate necessary resources and materials that support active pedagogies and innovation in the classroom. They can increase opportunities for teachers to refine and enhance their practice through professional development and collaboration. Moreover, school leaders can create space for and foster a culture of interdisciplinary and school-wide climate action projects. School leaders can lead the way by turning schools into green learning spaces that show what sustainability looks like in action. They can build partnerships with the local community, allowing students to exercise their agency.

Benny Koh, a teacher from Singapore (Figure 4), took the lead in creating a culture of sustainability at his school and integrated school infrastructure as a teaching tool for climate action.

Figure 4. Insight from Benny Koh, Teacher and Lead of Environmental Studies, Singapore



The video footage of this insight can be seen from: https://bit.ly/GTI_Benny

The bottom line

The goal of teaching for climate action is for young people to develop a comprehensive and nuanced understanding of climate change, consider climate matters from multiple angles, and feel empowered to transform their communities and society at large. Teaching for climate action calls on the collective response of all teachers, no matter their subject area expertise or the grade levels they teach, to consider refining and shifting current pedagogical practices, and collaborate with colleagues and the surrounding community to enhance their practice and impact. Furthermore, it urges schools and system leaders to consider how resources can best be used to support teachers to teach and empower all students for climate action. The insights collected show that many classrooms and schools are already leading the way into a more sustainable future.

www.globalteachinginsights.org

Contacts

Anna Pons (anna.pons@oecd.org)

Young Chang (young.chang@oecd.org)

talis@oecd.org

Notes

* This designation is without prejudice to positions on status, and is in line with United Nations Security Council Resolution 1244/99 and the Advisory Opinion of the International Court of Justice on Kosovo's declaration of independence.

1. The information in this document with reference to "Cyprus" relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Turkey shall preserve its position concerning the "Cyprus issue".

Note by all the European Union Member States of the OECD and the European Union.

The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

For more information

Schleicher, A. (2021), "Green at fifteen: What schools can do to support the climate", OECD Education and Skills Today blog, <https://oecdeditoday.com/green-at-fifteen-schools-support-climate/>.

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