Editorial

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Today's opening news celebrated the fact that the United Nations Climate Change Conference, known as COP28, issued a historical declaration that aims to achieve 'net zero by 2050 in keeping with the science'. Journalist Aline Flor, from Público, highlights that "the proposal from the presidency of the climate summit taking place in Dubai calls for a 'transition away from fossil fuels in energy systems, accelerating action in this decade'", and Damian Carrington, Environment Editor of The Guardian, illustrates its ambivalence ('Good Cop, Bad Cop'). Still, that science is being used as a reason for the changes now being proposed is equally significant and, in itself, a change for the better. It is also remarkable that this gives credit to the thousands of activists, most of them young, who have called for this change and the importance of listening to science over the last few years. The collection of papers in this issue presents an exciting combination of studies that address citizenship, environmental activism, and science, the significance of social and contextual factors, and the potential of education for promoting cognitive complexity and political and environmental agency.

The article of Juliana Diógenes-Lima, Sara Pinheiro, Joana Cruz and Carla Malafaia addresses problems of democratic participation and climate justice to understand how these concepts resonates locally and how gaps between discourse and lived experiences can be overcome. Climate justice has four main pillars – procedural, distributional, recognitional, and intergenerational justice. The study explores how these dimensions are reflected in peoples' experiences and views. The authors show how the concepts of climate justice resonate at the local level, through the perspectives of both young students and adult stakeholders in two communities in Northern Portugal and how intergenerational justice is interpreted differently by adults and youth: Adults do not acknowledge responsibility for climate impacts on future generations, while youth see themselves as more aware of issues. Young people are more likely than adults to identify distributional inequalities in how climate costs and solutions are shared.

The findings further show that while adults recognize the importance of youth participation, young people feel their voices are not genuinely heard or considered in decision-making processes. This represents a lack of procedural climate justice. While both generations see the need for structural changes through education, local policies, and individual behavior to build a fair climate future, ambitions are tempered by recognition of challenges to systemic and political transformation.

In the article *Education for environmental citizenship and activism through the development of nature-based solutions with pre-service teachers*, Linhares and Reis describe, evaluate, and discuss the potential of an educational intervention programme. This novel programme focuses on nature-based solutions, a concept often addressed in the climate mitigation and adaptation literature but that is still under-researched from an educational perspective. During seven weeks, 30 first-year students of an undergraduate course in basic education in Portugal engaged in a series of learning experiences involving researching and analysing data, planning actions, implementing those actions, networking activities and stakeholders' engagement. The intervention had a strong action-orientation dimension and encouraged students to work collectively in implementing nature-based solutions (e.g., hotels and shelters for insects, hedgehogs and bats; vertical gardens). Student participants assessed the intervention through focus group discussions addressing its potentialities and challenges. The results suggested that participants positively evaluated the intervention and recognised the potential of using nature-based solutions as a framework to facilitate environmental citizenship and activism. Likewise, students developed critical thinking and a more comprehensive understanding of environmental and climate challenges. In a world in a state of climate emergency, interventions that have the potential to increase climate knowledge, awareness and environmental activism – like the one described in this article – are highly needed.

In their article titled *Is the Coronavirus Created by the Government to Control Us?*, Katja Skjølberg, Irene Trysnes, and Elise Frølich Furrebø discuss Norwegian upper secondary school students' critical thinking and the prevalence of conspiracy beliefs among them. Learning critical thinking is a central aim of school in most countries in Western Europe. How students see their schooling in critical thinking may, however, not necessarily directly connect with how receptive they are to conspiracy theories or conspiracy beliefs. A number of social-psychological studies have shown that expertise in one area, for example, critical thinking, is not directly transferable to another area; thus, the sharpest minds may willingly support the most extraordinary beliefs. Skjølberg and colleagues surveyed 600 Norwegian students and asked what they assessed they had learned about critical thinking and conspiracy theories and whether they believed in some conspiracy theories. The authors want to underline that they did not collect data that would measure the students' critical thinking skills and that they have no information about what the students saw as critical thinking. The students answered that they had learned a lot about both critical thinking and conspiracy theories, but interestingly, there was no significant negative correlation between the students' self-reported learning about critical thinking and their beliefs in conspiracy theories. The authors discuss the pedagogical implications

of their findings and suggest that a good strategy to encounter conspiracy beliefs among students is to combine teaching critical attitude to them and showing empathy to their concerns that may reflect in their belief in conspiracy theories.

The important goal of social science education is not collecting data and information about politics, business and society but rather a deep understanding and a responsible ability to act. On the contrary, the focus of research - including large-scale assessments - has been primarily on the - often simple - assessment of specialist knowledge, while there is a significant lack of research about assessing deeper learning and understanding. The concern of Sheila Valencia, Walter Parker and Jane Lo is to remedy this deficiency: "(D)riven by teachers' requests for a valid, easy-to-administer and score, end-of-course test that aligned with the course outcomes" they want to ensure that teachers don't not only rely on textbook tests but also use tests, that are also intended for deep learning - and thus ultimately improve teaching and learning. Valencia, Parker, and Lo's paper presents findings on how to construct assessments that allow students to demonstrate their understanding in a meaningful task while providing argumentative explanations with relevance to the discipline and policy context. The authors explain the construction of such assessments using core disciplinary concepts and core disciplinary reasoning strategies, aiming to facilitate students' learning to engage with core concepts and strategies in multiple ways in iterative circles through a strategy they call "looping" to further their understanding. The article provides insight into the challenges of a Design-Based Implementation Research project that lasted seven years and involved 1,200 students and 13 teachers. The procedures for assessment development are shown, but also deep insights into overcoming the challenges associated with the requirements for validity and reliability, which are particularly evident in reading and writing difficulties, tasks and questions, test content and assessment procedures.

Do different types of schools shape teachers' thinking and teaching? Does this also apply to their view of the cultural capital of their students? In his article *Teachers' perceptions of cultural capital: How do they influence the teaching of civic, social and political education?*, Gearóid O'Brien explores these questions for three Irish school types of post-primary education. The analysis of over 200 questionnaires from the school coordinators for CSPE (civic, social and political education) revealed, among other things, characteristics for schools which enroll more students from working-class, non-employed, low-income and lone-parent households than other schools. Here, teachers see themselves confronted with language challenges and tend to respond by prioritising more practical elements of politics in the CSPE classroom, focusing on local issues and emphasizing the model of active and responsible citizenship. In contrast, in fee-paying schools, projects with a participatory approach and with an international perspective are more common. The study provides empirical findings that support Bourdieu's position that the school system reproduces the social hierarchy.

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