Education For Social Change:
The Role Of Education Trade Unions
In Addressing Sustainable Environmental Development
Acknowledgements

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<td>ACOD</td>
<td>Algemene Centrale der Openbare Diensten</td>
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<tr>
<td>CFDT</td>
<td>Confédération Française Démocratique du Travail</td>
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<tr>
<td>CGIL</td>
<td>Confederazione Generale Italiana del Lavoro</td>
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<tr>
<td>COVID</td>
<td>Coronavirus Disease 2019</td>
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<td>CPD</td>
<td>Continuous Professional Development</td>
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<td>DLF</td>
<td>Danmarks Lærerforening</td>
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<td>ECE</td>
<td>Early-childhood Education</td>
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<td>EES</td>
<td>Education for Environmental Sustainability</td>
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<td>EI</td>
<td>Education International</td>
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<td>EIS</td>
<td>Education Institute of Scotland</td>
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<td>ESD</td>
<td>Education for Sustainable Development</td>
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<td>ESTUS</td>
<td>Education, Science and Culture Trade Union of Slovenia</td>
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<td>ETUCE</td>
<td>European Trade Union Committee for Education</td>
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<td>EU</td>
<td>European Union</td>
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<td>EUA</td>
<td>European University Alliance</td>
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<td>FLC</td>
<td>Federazione Lavoratori della Conoscenza</td>
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<td>FSU</td>
<td>Fédération Syndicale Unitaire</td>
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<td>HE</td>
<td>Higher Education</td>
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<td>HEIS</td>
<td>Higher Education Institutions</td>
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<td>INTO</td>
<td>Irish National Teachers’ Organisation</td>
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<td>IT</td>
<td>Information Technology</td>
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<td>ITE</td>
<td>Initial Teacher Education</td>
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<td>JRC</td>
<td>Joint Research Centre</td>
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<td>OECD</td>
<td>The Organisation for Economic Co-operation and Development</td>
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<td>PISA</td>
<td>Programme for International Student Assessment</td>
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<td>PPMI</td>
<td>Public Policy Management Institute</td>
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<td>PSZ</td>
<td>Pedagógusok Szakszervezete</td>
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<td>SDG</td>
<td>Sustainable Development Goal</td>
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<tr>
<td>SNUIPP</td>
<td>Syndicat national unitaire des instituteurs, professeurs des écoles et PEGC</td>
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<tr>
<td>SOS-UK</td>
<td>Students Organising for Sustainability: United Kingdom</td>
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<td>UGT</td>
<td>Unión General de Trabajadores</td>
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<td>UK</td>
<td>United Kingdom</td>
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<td>UN</td>
<td>United Nations</td>
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<td>UNESCO</td>
<td>United Nations Educational, Scientific and Cultural Organisation</td>
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<td>VET</td>
<td>Vocational Education and Training</td>
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Executive summary

ETUCE contracted PPMI to research, with input from a project advisory group, the impact of the climate emergency on education and trade union policies in the European region. The research questions investigated the challenges that teachers, academics and other education personnel face due to changes in the environment, and focused on innovative practices of trade unions. The study relied on four sources of information: international policy literature; scientific academic literature; insights from a non-representative online survey with ETUCE member organisations in the autumn of 2021; and analysis of experiences and concerns shared by ETUCE member organisation representatives in two international workshops in Rome (April 2022) and Copenhagen (July 2022). The study identified four major types of challenges that trade union members face either due to the direct threat of climate change or due to working process changes and new demands for education during the climate emergency and reflected on three major areas of trade unions’ responses and actions to the challenges.

Challenges for teachers, academics and other education personnel

Increased workload and health problems

Research participants report that the most severe impact that environmental sustainability issues have on working conditions is on workload, followed by mental and physical health. About one in four survey respondents stated that the impact on workload is very negative. The potentially negative impact of teachers, academics and other education personnel taking a bigger role in creating sustainable learning environments on their overall work capacity has been noted in recent research and explained further in the validating workshops. Thus, it is not surprising, that respondents primarily answered that it is challenging to implement education for environmental sustainability (81%). Climate change also poses a direct threat to teachers, academics and other education personnel’s physical and mental health and well-being at work. Schools in some areas are more at risk of climate change hazards than others and face different forms of threats in their climate zones (e.g. mountainous areas at risk of landslides), especially in the countries where a significant share of buildings was built before the first thermal regulations in the 1970s. When asked to consider groups at risk due to the direct and indirect impact of climate change, research participants mentioned older rather than younger teachers, academics and other education personnel, and those in rural rather than urban areas. These groups, as well as special needs staff, are at a disadvantage when facing natural hazards due to their location, working environment and prior conditions. Overall, research participants in Southern Europe reported more acute problems with climate change, whereas research participants in the Northern region of Europe reported fewer such issues and rather highlighted other challenges such as teacher shortages.

1 In the context of this study, the European region encompasses all the EU countries, candidate countries, EEA countries, Andorra, Azerbaijan, Belarus, Faeroe Islands, Falkland Islands, French Guiana, French Polynesia, Israel, Kazakhstan, Kosovo, Kyrgyzstan, Liechtenstein, North Macedonia, Moldova, Monaco, Montenegro, Netherlands Antilles, Russia, Saint Helena, Saint Martin, Saint-Pierre and Miquelon, San Marino, Tajikistan, Turkmenistan, Ukraine, United Kingdom and Uzbekistan.
Need for more accessible and relevant training opportunities

Research participants emphasised that teachers, academics and other education personnel are not prepared to teach environmental sustainability or deal with the challenges they face due to the impact of climate change on their profession because of a lack of high-quality and accessible training opportunities. Lack of training, including of school leaders, is a barrier to coping with environmental sustainability issues and implementing education for environmental sustainability comprehensively and holistically in the content and operations of education institutions. Respondents reported that the most severe challenges were the lack of relevant initial teacher education (ITE), continuous professional development (CPD) being organised outside of working hours, and lack of relevant and good-quality CPD opportunities. These findings should be read in conjunction with the prior noted finding that ETUCE member organisation representatives are most concerned about environmental sustainability issues negatively impacting workload, as lack of training exacerbates problems with workload. There is a need for more easily available and good-quality learning opportunities, but for these to provide real learning opportunities they need to be scheduled within working hours to prevent further mental and physical strain on staff. Research participants thus emphasised the need for more accessible and high-quality education opportunities, especially short-term CPD.

Insufficient curricula, assessment frameworks and professional autonomy

Across the European region, curricula and accompanying assessment frameworks are not yet adapted to effectively deliver EES. Skills and competences are not defined, and existing assessments do not measure them. Research participants were particularly concerned with the lack of priority of EES within national assessments and curricula frameworks in their countries. Including EES more comprehensively in the curricula and national assessments is crucial as it would signal the need for its prioritisation, funding, learning materials and time allocation further down the line. When there is a lack of suitable curricula and guidance, teachers, academics and other education personnel tend to turn to online learning platforms to search for additional resources and to fill the gap in their knowledge, thus increasing the influence of private and unregulated actors influence on education. Furthermore, to a large extent teachers, academics and other education personnel do not feel included in the policy decision-making processes in the countries and are concerned with the lack of discretion within national education frameworks for education personnel to apply the curricula as suited to their local context. It should be noted that there are differences between the ETUCE member states participating in the research and that there has been an increasing push in some countries in recent years to improve curricula and assessment frameworks.

Lack of political vision and serious investment

The lack of prioritisation of the topic among governance actors is a major barrier to mainstreaming EES more widely, and the lack of assessment mechanisms for EES is ultimately proof that the topic is not a political priority in education. Overall, the impression of the trade unions is that politicians across the European region are not doing enough to mainstream good practices across countries to transform the education system in a manner that is sufficiently comprehensive to respond to the green transition envisaged in the labour market and the need for every citizen to develop a sustainability mindset from an early age. Diminishing public resources make it harder to free up budgets to implement whole-institution initiatives or support institutions in making needed changes. This is in line with recent
research at the EU level from the primary to higher education level\(^2\). Strong and effective leadership is crucial to ensure holistic school approaches, overcome institutional challenges, such as lack of relevant classroom infrastructure and space, and attract qualified staff. However, education leadership cannot act without support and funding. Lastly, research participants highlighted the lack of linking the national education systems to the Sustainable Development Goals (SDGs) and in particular, SDG 4 on education for sustainable development, in key sectoral documents on the green transition, as this also signals a lack of understanding and prioritisation at the national level of the need to meet the demand for skills for the green transition with EES. It should be noted that the extent of lack of prioritisation from the top down differed from country to country in the study.

Trade union responses to the climate emergency

Strategic level of trade unions: policies and priorities for EES are less common

Overall, there is a lack of urgent priority and strategic action within the trade unions on environmental sustainability. With regards to the response from trade unions, the study discovered that while there has been an increased interest among trade unions in alleviating these challenges, there is often a focus on traditional thematic areas (e.g. pay, health etc.) rather than revitalised discourse topics and education reform. Developing comprehensive policies on environmental sustainability and collective bargaining priorities for this purpose are not common. More than half of the survey respondents report that their trade union does not have a comprehensive policy in place at all and does not engage in social dialogue on the topic; the respondents attribute this to environmental sustainability not being considered a priority by the trade union or its leadership. This is partially due to the limited human and financial resources within the trade unions themselves. The difficulty or unwillingness to fit the topic into the traditional trade union agenda on working conditions, labour rights and pay among members and/or leaders of the trade union is also a reason why trade unions are not taking stronger action. Overall, the challenges highlighted by ETUCE member organisations which further limit trade unions’ effectiveness in policymaking on the topic were 1) limited human and financial resources in the trade unions; 2) lack of cross-sectoral communication on environmental sustainability and climate change priorities; 3) controversy regarding the use of the trade union action for addressing climate change; 4) lack of sufficient data regarding the views and needs of their affiliates on addressing environmental issues, and 5) overall weak social dialogue.

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Unique tools of social dialogue and collective bargaining not utilised

Social dialogue is an important tool for addressing environmental sustainability in the teacher, academics and other education personnel’s professions and institutions they work in. Only half of the participating ETUCE member organisations participate in social dialogue on environmental sustainability, and collective bargaining is the least common among the types of social dialogue. Most of the measures ETUCE member organisations carry out are taken by working alone on the topic and through information-sharing. In order for information-sharing to be considered a part of the social dialogue, it needs to be carried out strategically and targeted at social partners to achieve specific goals. Unfortunately, the impression from the study is that often information-sharing is carried out in a more passive way that cannot constitute social dialogue. There is thus much more potential here for ETUCE member organisations to engage in more strategic social dialogue including collective bargaining which is a unique and one of the most powerful tools of trade unions and cross-sectoral broad alliances, and which is one of the good practices highlighted by the study. More importantly, this finding is in line with the general trend of the decrease and deterioration of social dialogue across sectors - a situation which requires action from employers and authorities to revamp the social dialogue.

Need for more trade union actions and peer learning to meet demand

The actions of ETUCE member organisations on the topic of environmental sustainability have only just begun in many countries, and there is a need to further increase the number and frequency of actions in order to have more influence in this area. This does not have to be done quickly and needs to be carried out alongside the development of expertise within the ETUCE member organisations to bring about convincing actions. In open-ended questions, several respondents stated that they are in the explorative phase of trade union policymaking on how to deal with the climate emergency in education and that they would have devoted more resources to it if the trade union had more funds, dedicated staff and time available. As many as 22% of the respondents’ trade unions have not dedicated sufficient resources for activities and furthermore they do not monitor the quality of their impact in this regard. There is therefore a huge need for ETUCE member organisations to learn from each other on what works and to be motivated to invest more time, staff and overall effort in sustainable practices, projects and social dialogue.
Introduction
The European Green Deal (EGD) is the key guiding document and growth strategy providing the path to establishing a modern, resource-efficient and competitive green economy in Europe. The war in Ukraine has increased cross-border solidarity in the European region and highlighted more than before the need for clean, affordable, and secure energy. In this context, the green transition envisaged by the EGD has recently been flagged as the only solution to the existential climate threat and to safeguarding European sovereignty and democracy. The EGD emphasises that education, training and lifelong learning need to accompany the transition to environmental sustainability. Education, training and lifelong learning can foster the competences needed to find solutions, change consumption models and transform society towards a more sustainable way of living. This responsibility is emphasised in the EU’s Council conclusions on Education for Sustainable Development (ESD)
5; the proposal for a council recommendation on Education for Environmental Sustainability (EES)
6 and in ETUCE’s resolution on the sustainable future of Europe
7 and position paper on the latest proposal for a Council recommendation
8.

When education is recognised as having an increasingly important role in ensuring societal ‘green transitions’, the role of and demands required of teachers, academics and other education personnel increase equally. Thus, recently, several studies at both the global, EU and national levels studies have focused on the awareness and perception of teachers, academics and other education personnel of this trend and how to support them in implementing education for environmental sustainability
9. Furthermore, the risks and uncertainties accompanying climate change can have detrimental effects on the physical and mental health of teachers, academics and other education personnel
10. These studies highlight that, in Europe, the common challenges faced by teachers, academics and other education personnel when implementing EES and confronting climate change are few educational resources (content, material and guidelines) and, particularly in rural schools, insufficient support (e.g. training, funding, remuneration, health and security measures)
11.

Trade unions are instrumental in ensuring that teachers, academics and other education personnel have a say in transitioning to education for sustainable environmental development and that they are supported, prepared and motivated to promote deep learning and skill development on topics related to sustainable environmental development. They should also be prepared and supported to meet diverse direct impacts of the climate change on their working conditions. Empowering teachers, academics and other education personnel will ensure that the transition to green education is effective, impactful and sustainable over time. Thus, the ETUCE project “Education for Social Change: The role of Trade unions in addressing sustainable environmental development” aims to build the capacity of trade unions to prepare their affiliates in Europe to address environmental questions and climate emergency for sustainable development in education and training through social dialogue and collective bargaining. The objective is to address both the impact that environmental sustainability measures and climate emergency have on the employees and their working conditions as well as the impact it has on education and education priorities.

During this project, ETUCE contracted PPMI to research and develop, with input from the project advisory group, research questions to be addressed to ETUCE member organisations. The survey focused on the impact of the climate emergency

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11 Mulvik, I. B., Pribulis, K., Šašiūtė, H., Šabaliauskaitė, E., Coudelli, W. & M. Yemini. (2021). Teachers have their say: Motivation, skills and opportunities to teach education for sustainable development and global citizenship. UNESCO and Education International. Available at: https://unesdoc.unesco.org/ark:/48223/pf0000379986.
on working conditions and on education and trade union policies, including the provision of equal access to quality education for all and integration of environmental, climatic and sustainable development issues in education and trade union policies. In parallel, PPMI carried out a literature review to identify environmental or education-related challenges faced by the education sector and education workers in different national and local contexts in Europe and to better understand how trade unions are currently experiencing and addressing those challenges. Two workshops organised by ETUCE throughout the project acted as validating focus groups and additional resources for verifying the challenges and potential solutions discovered through the research. The research results are synthesised in this report and will inform ETUCE’s actions on policy and social dialogue for sustainable environmental development.

1.1. Key concepts and definitions

To ensure consistency throughout the project, the research team identified and defined the following key concepts (Table 1) and included the relevant definitions in the online survey.

<table>
<thead>
<tr>
<th>Concept</th>
<th>Definition</th>
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<tbody>
<tr>
<td><strong>Education system terms</strong></td>
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<tr>
<td>Teachers, academics and other education personnel</td>
<td>This includes teachers, trainers, academics, and other education and education support personnel. Education support personnel cover a wide range of professional, administrative, technical, and general staff working within the education sector such as teaching assistants, school nurses and psychologists, bursars, and bus drivers, among others (e.g. childcare personnel).</td>
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<tr>
<td>Education policy</td>
<td>This refers to the collection of laws and rules that govern the operation of education systems, and the actions taken by governments about the management and delivery of education at the regional or local state/governmental level. Education policies cover a wide range of issues (e.g. curricula, funding and assessment).</td>
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<tr>
<td>Whole-institution approach</td>
<td>Learning on a given topic is included in all aspects of an institution, requiring the reviewing and revising of the institution’s operations, internal and external relationships, the learning programme (teaching, learning and research), the site (management) and the community (external relations). These more encompassing practices at the learning institution are interlinked holistically to foster learning for (taking a stand on the topic), in (learning in the community), about (facilitating knowledge transfer) and through the topic (supportive learning culture).</td>
</tr>
<tr>
<td><strong>Environmental sustainability vocabulary</strong></td>
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<tr>
<td>Sustainable development</td>
<td>The most widely used definition is the one from the Brundtland Report “Our Common Future”: sustainable development ‘meets the needs of the present without compromising the ability of future generations to meet their own needs’ (1987, 43). The report emphasises that environmental, social and economic factors are interlinked and must be considered together to achieve sustainable development.</td>
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<tr>
<td>Environmental sustainability issues</td>
<td>By adding environmental to the sustainability term, we simply specify that the focus is on the environmental issues related to sustainability, rather than social and economic issues. Environmental sustainability issues cover a wide range of thematic areas of concerns that prevent sustainable development and reduce the life quality of humans and animals, e.g., air pollution, greenhouse gas emissions, biodiversity decline, manmade climate change and related natural hazards.</td>
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<tr>
<td>Climate change adaptation</td>
<td>Adaptation planning is a process of adjustment to the impacts of climate change, including actions taken to reduce the negative impacts of climate change or to take advantage of emerging opportunities.</td>
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## Concept Definition

### Climate change mitigation

Climate change mitigation refers to the efforts to avoid and reduce emissions of heat-trapping greenhouse gases into the atmosphere to prevent the planet from warming to more extreme temperatures.

### Education for environmental sustainability

This makes students aware of, sensitive to, and knowledgeable about the environment and its interconnectedness to social and economic systems while providing them with attitudes of concern and motivation, and practical, systems and critical thinking skills to identify and solve environmental problems. Other terms such as education for sustainable development or climate change education are also used and understood as being related and having similar learning objectives. We stick to education for environmental sustainability to highlight the importance of the environmental dimension of the sustainable development goals.

## Social dialogue vocabulary

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<tr>
<th>Social dialogue</th>
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<tr>
<td><strong>Social dialogue</strong></td>
<td>Social dialogue covers all types of negotiation, consultation or exchange of information between, or among, representatives of governments, employers and workers, on issues of common interest relating to economic and social policy. Social dialogue takes many different forms. It can exist as a tripartite process, with the government as an official party to the dialogue or it may consist of bipartite relations only between labour and management (or trade unions and employers’ organisations), with or without government involvement.</td>
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<td><strong>Negotiation</strong></td>
<td>Negotiation is the process in which two or more parties, usually employer and employee representatives, discuss specific offers, to reach mutually acceptable agreements.</td>
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<td><strong>Collective bargaining</strong></td>
<td>This is the negotiation process during meetings between employees and employers to improve working conditions and pay. The collective bargaining process allows workers to approach employers as a unified group and reach an agreement between employers and workers collectively. Parties can engage in collective bargaining at organisational, sectoral, regional, national and multinational levels.</td>
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<td><strong>Consultation</strong></td>
<td>This requires an engagement by the parties through an exchange of views which can lead to more in-depth dialogue. The parties participating in tripartite or bipartite bodies can engage in negotiations and the conclusion of formal agreements. Some parties are only consultative and information bodies, whereas others are empowered to reach agreements that are binding on the parties (e.g. governments, workers and employers).</td>
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<td><strong>Information-sharing</strong></td>
<td>It is one of the most basic and indispensable elements for effective social dialogue that targets governments, employers and other key social partners. It implies no real discussion or action on the issues, but it is nevertheless an essential part of those processes by which dialogue and decisions take place.</td>
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1.2. Social, political and trade union contexts

This study recognises that not all ETUCE member organisations have the same prerequisites to engage in social dialogue and collective bargaining to prepare teachers, academics and other education personnel as well as the education delivery system overall for the green and just transition. This section, therefore, outlines some of the social, political and trade union contextual factors stemming from a review of the literature that could limit or enable the influence of ETUCE member organisations on embedding EES, sustainability and climate change measures into their education systems which are crucial to keep in mind when reflecting upon and interpreting the findings of the study.

One key area where the social, political and trade union context can be different between the countries regards the constitutional framework on freedom of association, right to collective bargaining and right to strikes, and the opportunities for exercising these rights in practice. In countries where trade unions have been bound to single political parties, there is the risk of trade unions being biased towards certain strategic sectors of the economy and industry, which may hamper both green economic growth and democratic development. Lower scores on democracy indicators and higher scores on corruption indicators could negatively impact the influence of trade unions in a given country on the topic of environmental sustainability, especially if the private sector and political actors are opposing sustainability and climate changes measures. Democratic processes both within a country and within the trade union movement, however, can have a positive impact on the power and influence in general of the trade union on negotiations and policy development.

Another factor highlighted as potentially negative for the influence of trade unions on policies in the literature is the extent of liberalisation and labour market dualisation in a country. Scholars have argued that liberalisation on the one hand has moved labour markets, especially in Western Europe, towards a market-oriented organisation of the economy, which has reduced the power and influence of trade unions, while dualisation reforms to protect ‘insider workers’ has led to an equally unhealthy segmentation between ‘good’ and ‘bad’ jobs in which increasingly more workers experience precariousness and are less likely to unionise – which again further weakens the trade unions’ capacities to act comprehensively on specific issues. This situation has been termed a ‘double crisis’ for trade unions: a socio-economic crisis on the one hand associated with growing social exclusion, and a socio-political crisis on the other in the form of an increasing marginalisation of the trade unions from the political process in countries across Europe and Asia.

Recent research suggests, however, that it is not clear cut that labour segmentation per se has a negative effect on the influence of trade unions, as trade unions may still have room to manoeuvre around various barriers and enablers to their effectiveness depending on the strategies trade unions employ for the situation and the financial and human resources capacities within the trade unions itself. For example, in Italy, trade unions have explored new avenues of political agency, often in alliance with civil society organisations, to approach topics of broader societal justice encompassing broader social groups than ‘insiders’, and also taking on new topics outside the traditional scope of trade unions. A cultural acceptance or strategic decision within a country or within the overall trade union movement

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of such ‘social unionism’: ‘the development of solidaristic policies beyond their traditional constituencies (i.e. permanent workers) and domain of action (i.e. the workplace)’ could thus be seen as a social contextual factor in a country. This would positively influence the motivation and ability of ETUCE member organisations to take up new untraditional topics such as education for environmental sustainability.

There is a key demarcation between the ETUCE member organisations regarding the change in education origins and who has the most influence over the process, since this indirectly impacts the role and influence of the ETUCE member organisations. First, it can be a primary policy/state-driven approach in which the government revises national curricula with the focus on sustainability, availability of nationwide reskilling programmes, etc. and there is little input from other actors, coupled with fiscal stimulus from the top. In other countries, outside stimulus funding and private sector investment will be the main source of skills demand and the private sector has been proactive in the development of education and training. In countries where the government takes less of an active role, the private sector sometimes plays a key role instead. In such cases, the greening of the education system is largely organic, driven by immediate commercial needs and opportunities rather than by overarching policy frameworks set out by the state. Lastly, demand driven by civil society would typically result in decentralised education offers (at the level of non-formal learning of core sustainability skills organised by NGOs). This demonstrates that there are different models of delivery of education for green transitions and different forms of collaboration between the government and other social actors, including trade unions. This demarcation can be understood as the difference between top-down and bottom-up approaches to change as visualised below. In the case of the countries that held the workshops as part of the study (Italy and Denmark), the former presents a good example of a country where the drive for change in education primarily comes from the top, while the latter presents a good example of a more nuanced situation where the drive for change in education comes both from the top and the bottom at the same time.

**FIGURE 1. MODEL OF DIRECTION OF INFLUENCE OF ACTORS IN SKILLS DEMAND AND SUPPLY**


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1.3. Methodological approach of the study

This mixed-methods study consisted of a literature review focusing on international policy literature and academic scientific sources, an online survey and two validation workshops. The report presents findings stemming from the analysis of the collected secondary data, the survey and workshop insights to answer the research questions presented in Table 2.

**TABLE 2. RESEARCH QUESTIONS**

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<tr>
<td>1</td>
<td>What challenges do professionals in the education sector face due to changes in the environment?</td>
</tr>
<tr>
<td>2</td>
<td>What impact do sustainable development measures implemented in educational institutions have on education professionals?</td>
</tr>
<tr>
<td>3</td>
<td>How do the challenges professionals in the education sector face differ by national and local context, gender, and other key background factors?</td>
</tr>
<tr>
<td>4</td>
<td>What are the practices of trade unions, especially concerning social dialogue, that support and build the capacity of their affiliates to address environmental sustainability issues?</td>
</tr>
</tbody>
</table>

The literature review aimed to document existing evidence on addressing environmental issues and sustainable development and its impact on workers to better understand the challenges faced by teachers, academics and other education personnel and trade unions alike across all education levels. A secondary objective was to collect good practices, measures and tools that trade unions can implement to foster sustainability in education.

The online survey aimed to better understand the perspective of trade unions and the teachers, academics and other education personnel they represent towards sustainable environmental development issues. The survey targeted representatives of ETUCE member organisations who operate in the European region. It asked about the impact of environmental sustainability issues on their practices and on trade union members, their experience with implementing EES, professional development needs of trade union members, trade union’s policies on addressing EES and practices on social dialogue for environmental sustainability.

The workshops aimed at gaining more in-depth information on the challenges and opportunities on the topic in each ETUCE member organisation focusing on understanding the processes and reasons for change or stagnation. The workshops also acted as a ground for validating the findings from the survey and desk research and getting feedback from those ETUCE member organisations that did not participating in the online survey. The workshops took place in Rome and Copenhagen, with most of the ETUCE member organisations participating.

The survey ran from 20 September to 16 December 2021. Due to the targeted approach of surveying only ETUCE member organisations, there was a limit to the possible number of respondents. Out of 127 ETUCE member organisations, 44 participated. Due to the non-representative nature of the survey and the limited number of respondents, analysis that compares responses based on different background characteristics and context should not be inferred as globally valid. Thus, the report primarily analyses the frequency of responses to the survey questions in tandem with literature review findings and insights from the validating workshops with the ETUCE member organisations.

*Figure 2* below shows that the 44 respondents represent 30 diverse countries in the European region.
Figure 2 shows the countries represented in the survey. ETUCE Online Survey September-December 2021, N: 44.

Figure 3 shows that the respondents primarily answered on behalf of all education levels. In addition, most respondents answered the survey on behalf of the whole country (84%) while a smaller share answered based on a specific region within the country (16%).
Figure 4 shows that most organisations that reported shares of members according to gender, recorded a majority of female members (on average 75%). It should also be noted that most of the trade union members in the ETUCE member organisations are between 41 and 60 years of age.

FIGURE 4. BACKGROUND STATISTICS ON ETUCE MEMBER ORGANISATIONS’ MEMBERS

- 75% of members are female
- 49% are 41-60 years old
- 35% are 34-40
- 15% are above 60

Study findings
This study relied on four sources of information: international policy literature, scientific academic literature, insights from a non-representative online survey with ETUCE member organisations in the autumn of 2021, and analysis of experiences and concerns shared by ETUCE member organisation representatives in two international workshops in Rome (April 2022) and Copenhagen (July 2022).

The research participants attest that education for environmental sustainability actions and initiatives are happening in most of the countries in the European region, but voice concerns about the extent to which high-quality education on the topic is mainstreamed across the countries, regions and social groups. A majority of 68% (30 of 44) of survey respondents stated that their members are involved in implementing education for environmental sustainability, with teaching being more widespread in the Scandinavian, wealthier and bigger EU countries. Furthermore, a majority of 64% reported that there is wider interest in EES in their countries (28 of 44 respondents). The countries where research participants claimed there was little interest were Albania, Armenia, Cyprus, Czechia, Poland, Romania and Slovenia.

A recent mapping study of the implementation of EES in the European Union attests that education systems and communities have increasingly promoted a sustainability mindset. This can be seen by sustainability goals being included in education policy strategies and at least half of the Member States including EES in the national curriculum at school level. At the institutional level, some countries especially in the Scandinavia countries have a longer tradition for collaborations, action research and education networks to mainstream positive EES practices. Yet, the study widely concluded that in Europe, EES is not a systematic feature of education policy, especially in ECE and Higher Education, and that there is a long way to go in teaching it through whole-institution approaches, as a cross-cutting issue, across social, economic, and environmental dimensions and by instilling action competences in learners. It is therefore timely to investigate further the challenges teachers, academics and other education personnel face when responding to the climate threat impacting themselves and their communities.

### 2.1. Barriers to transformative change in the education sector

#### 2.1.1. Challenges facing teachers, academics and other education personnel

This section discusses challenges facing teachers, academics and other education personnel due to environmental sustainability issues and measures in education, as reported in the online survey of ETUCE member organisations and, where relevant, other empirical studies, and as confirmed by participants to the ETUCE validating workshops.

The challenges facing teachers, academics, and other education personnel with regards to environmental sustainability must be seen in connection with the current situation in education in the European region. The pandemic brought to light and reinforced ongoing challenges such as regional and socio-economic inequalities in accessing high-quality education and the lack of comprehensive national digital capacity of the education sector. For teachers, academics and other education personnel involved in implementing the new ways of learning, this was a period of uncertainty.
and stress, whereas school closure could imply temporary layoffs and financial insecurity. Other ongoing relevant challenges facing education personnel in the European region are the war in Ukraine and the influx of refugees, demographic change, teacher shortages (affecting all disciplines), burnout and mental ill-health, attrition in socio-disadvantaged areas, harmful narratives about teacher quality, hate crime and bullying, and overall increased precariousness in the profession. Research participants attested that in many cases their members are exhausted due to the impact of the COVID-19 pandemic, and overwhelmed by the atrocities in Ukraine and the security threat and economic instabilities it poses.

2.1.1 Increased workload and health problems

Physical effects on school environment and infrastructure (e.g. damage, air pollution), which are only expected to intensify, and the demands of climate change mitigation measures (e.g. whole-school education approaches), are the core ways in which climate change impacts education systems. The risks and uncertainties accompanying climate change have been found to have detrimental effects on the physical and mental health of education personnel.

Education personnel need adequate resources and support to work in and cope with an increasingly hazardous environment in many areas.

Attesting to this, most of the survey respondents reported that it is challenging (97 %) for education personnel to manage the impact of environmental sustainability issues on their working conditions on their own. In open-ended questions, several respondents commented on discomfort from working indoors due to increasing temperatures, and insufficient ventilation and cooling: ‘Due to the high temperatures [in] the summer, it is no longer possible to teach in classrooms (Hungary)’; ‘High temperatures in June in old buildings […] impact working conditions negatively’ (Belgium); ‘In Romania, schools closed because of bad environmental conditions.’ Research participants mentioned among the hazards in schools were air quality, asbestos and pollution, poor waste and water management. In addition, research participants highlighted the issue of mobility, and the risks of health issues occurring on the way back and forth to work, as well as the contribution of mobility to education institutions’ carbon footprints. Besides, in light of the ongoing energy crisis, it may become more difficult for education institutions to pay for electricity and ventilation necessary to sustain a comfortable learning environment and wellbeing.

In the European region, some areas, and subsequently education institutions, are more at risk of climate change hazards than others. The Atlantic region of Europe faces more heavy rain, river flow, flooding and damage due to storms in the winter. The Continental region faces more weather extremes, less rain, higher risk of river flood and forest fires. The Mediterranean faces more heat extremes, less rain and river flows, a higher risk of droughts, biodiversity loss and forest fires. In mountainous areas, where temperatures increase more than the European average there are risks such as rockfalls and landslides. In boreal regions, there is more heavy rain and dangerous winter storms. In the Arctic, temperatures increase much more than the global average. In the Central Asian region, expected climate change

23 Michelle Taylor, Leigh McClure, Crystal I. Bryce, Tashia Abry, Kristen L. Granger (2019). The influence of multiple life stressors during teacher training on burnout and career optimism in the first year of teaching, Teaching and Teacher Education.
stressors include increases in temperature, extreme weather events, and glacial melt, which will likely lead to the continued expansion of deserts and arid areas\textsuperscript{28}. In the South Caucasus, risks include increased Black Sea level, heat waves, soil erosion, desertification, flood and wind intensification and extreme heat (especially Azerbaijan)\textsuperscript{29}. Overall, research participants in Southern Europe reported more acute problems with climate change, whereas research participants in Northern Europe reported less such issues and focused instead on other challenges such as teacher shortages.

In most European countries, a significant share of buildings was built before the first thermal regulations in the 1970s. This means that their overall energy performance and resistance to extreme temperature changes is comparatively low. In some countries, such as Cyprus, Ireland, and Spain, the share of new dwellings (built after 2000) is significant, while in others the stock of old housing is bigger (UK, Belgium, Denmark)\textsuperscript{30}. There is more research on the quality of residential buildings across Europe than on non-residential buildings, but studies that compare standards across school buildings find that they vary considerably across and within countries. Poor conditions of school buildings, including physical defects and lack of proper ventilation, contribute to poor air quality\textsuperscript{31}. This situation means that learners, teachers, academics, and other education personnel are not equally safe across countries and regions in case of natural hazards and that some are already more at risk due to ‘slow killers’ such as pollutants and asbestos. The issue of energy performance and resistance to extreme temperatures, in particular, matter in the current climate where energy prices are soaring due to a supply crunch in natural gas, the war in Ukraine and bottlenecks for upscaling renewable energy. Education institutions that will spend more on energy or other emergent climate resilience measures, will have fewer funds available for the educational components of school infrastructure or initiatives to foster positive learning environments - especially considering the ongoing energy crisis in the European region. Thus, the direct impact of climate change on institutions and personnel may threaten learning environments and the ability to implement EES effectively.

The survey asked respondents about the impact of environmental sustainability issues on teachers, academics and other education personnel (See Figure 5).

\textsuperscript{30} European Commission, DG Energy (n.d.) Building stock characteristics. Available at: https://ec.europa.eu/energy/eu-buildings-factsheets_en
Education for social change: the role of education trade unions in addressing sustainable environmental development

**Figure 5. Extent of the Impact of Environmental Sustainability Issues on Teachers, Academics and Other Education Personnel**

<table>
<thead>
<tr>
<th></th>
<th>Very negative impact</th>
<th>Negative impact</th>
<th>No impact</th>
<th>Positive impact</th>
<th>Very positive impact</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Workload</strong></td>
<td>23%</td>
<td>43%</td>
<td>25%</td>
<td>5%</td>
<td>6%</td>
</tr>
<tr>
<td><strong>Mental Health</strong></td>
<td>9%</td>
<td>55%</td>
<td>27%</td>
<td>5%</td>
<td>9%</td>
</tr>
<tr>
<td><strong>Physical Health</strong></td>
<td>9%</td>
<td>52%</td>
<td>22%</td>
<td>5%</td>
<td>9%</td>
</tr>
<tr>
<td><strong>Personal Economy</strong></td>
<td>11%</td>
<td>43%</td>
<td>41%</td>
<td>2%</td>
<td>8%</td>
</tr>
<tr>
<td><strong>School Closures</strong></td>
<td>5%</td>
<td>39%</td>
<td>52%</td>
<td>6%</td>
<td>9%</td>
</tr>
<tr>
<td><strong>Safety Related Risks</strong></td>
<td>35%</td>
<td>55%</td>
<td>5%</td>
<td>9%</td>
<td>2%</td>
</tr>
</tbody>
</table>


**Figure 5** shows that the most severe impact of environmental sustainability issues on working conditions is on workload, followed by mental and physical health. We understand the negative impact on workload, the amount of work a person needs to do in a certain time frame, as the additional time that teachers, academics and other education personnel need while having the same work hours, time frame and salary, and in particular in relation to mitigation and adaptation measures. About one in four respondents state that the impact on workload is very negative. The most concerned ETUCE member organisations represented Bulgaria, Hungary, Ireland, and Lithuania, as the impact was considered very negative both on workload and the personal economic situation of workers. The potentially negative impact of teachers, academics and other education personnel taking a bigger role in creating sustainable learning environments on their overall work capacity has been noted in recent studies.

Thus, it is not surprising, as can be seen in **Figure 6**, that respondents answered that it is ‘slightly challenging’, ‘challenging’ or ‘very challenging’ to implement education for environmental sustainability (81 %). Several research participants explained that the sustainability competences presented by the Joint Research Centre (JRC) and European Commission is perceived as an ‘impossible’ addition to the existing seven transversal competences of the EU Lifelong learning strategy. In addition from the demand and list of skills and competences to teach being considered demanding by some, the energy and effort in education has been on improving digital education and skills during the COVID-19 pandemic. Considering regional differences, the survey found that ETUCE member organisations representing five countries reported that implementing EES is very challenging: Albania, Georgia, Italy, Poland and Slovenia. In addition, ETUCE member organisations in Italy and Slovenia also reported no wider interested in EES in society, and that it is difficult for ETUCE member organisations to engage in the topic through social dialogue or to engage in social dialogue.

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32 UNESCO (2021) Teachers Have Their Say. UNESCO and Education International. Available at: https://unesdoc.unesco.org/ark:/48223/pf0000037984, locale=en


whatsoever. This is in stark contrast to Scandinavian or wealthier European countries, that were more likely to state that it was ‘not challenging’ or only ‘slightly challenging’ to implement EES.

FIGURE 6. DEGREE OF CHALLENGES FOR TEACHERS, ACADEMICS AND OTHER EDUCATION PERSONNEL IN RESPONDING TO ENVIRONMENTAL SUSTAINABILITY ISSUES

Overall, Figure 6 shows that one fifth of the respondents did not consider this challenging. Furthermore, respondents were more positive about it compared with managing the direct impact of climate threats (10 percentage points difference). This should be noted since other studies have found that education personnel enjoy engaging in and practising environmental sustainability education which offers opportunities for outdoor exploration, creativity, and multidisciplinary approaches in teaching35. When asked about positive experiences reported by trade union members, a survey respondent commented: ‘Pupils are engaged in this work and care about it’ (Scotland). Teachers, academics and other education personnel feel that young people care about the cause and are therefore motivated to learn. OECD PISA 2018 results also show that students have a high level of awareness and environmental literacy, although they feel the lack of power and agency to do something about it36. Currently, teaching environmental sustainability education in the European region is only mandatory in a very few countries. Since it is taught primarily on a voluntary basis, by teachers, academics and other education personnel who are interested in the topic, and with little demands for testing and assessment, it may be less challenging for those motivated to implement it. Motivated education personnel, however, may become exhausted in the long term – especially if the work is unpaid and outside regular hours – and their teaching alone would not be enough to ensure a systematic and comprehensive teaching of EES which benefits all learners. Research participants highlighted that very motivated teachers in some sense constitute another vulnerable group of teachers, academics and other education personnel.

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When asked to consider groups at risk due to the direct and indirect impact of climate change in the survey, respondents reported older rather than younger teachers, academics and other education personnel, and those in rural rather than urban areas (Figure 7). Research participants explained that older colleagues are more vulnerable due to other potential conditions and weaker immune systems. In some countries, these groups, as well as special needs staff, are at a disadvantage when facing natural hazards due to their location and prior conditions: ‘Older teachers and school staff (60% of the teachers) in Portugal suffer a lot due to the lack of school conditions in facing the excessive heat’. Rural communities are most impacted by flooding and older education personnel are increasingly at risk of air pollution complications (UK). Research participants also highlighted intersecting disadvantages with gender in the open-ended questions as a key issue: ‘Most of the teachers are women in their 50-60s, suffering from menopause which naturally affects their health with hot flashes and low energy, which worsens with the high temperatures and the lack of conditions in the classroom’ (Portugal); ‘Education personal with special needs or from migrant backgrounds may find it more difficult to find advice/support than the other groups listed’ (Scotland).

In response to a survey question about the barriers to EES, respondents were more satisfied with the standards in educational institutions with regards to regulations and measures of a healthy working environment compared with curricula and national assessment systems. Literature suggests that there will be differences across the European region due to the different quality standards of school buildings. Furthermore, measures for a healthy physical teaching environment at the education institution are a part of holistic school approaches and require good leadership. Studies have found that where there is a lack of holistic school approaches, educational institutions often focus on narrow measures such as introducing recycling bins or measuring the air quality when required, rather than working to improve the whole site to enhance the environment and well-being standards for all 37. It should therefore also be noted that although survey participants may be relatively less dissatisfied with official regulations and measures for a healthy physical teaching environment, this may not match the standard of the teaching environments in practice.

In fact, research participants answered that the biggest challenge for the trade union when working on this issue from health perspectives was the little attention from and awareness of the topic among politicians and society.

Sustainability has not been given sufficient attention systemically in several countries and the awareness of the issue is generally low among the population (e.g., Ukraine, Albania, Romania and Turkey). A workshop participant from Portugal questioned the lack of transparency on how air pollution is measured in schools and lack of information which also puts professionals and learners at risk. These concerns suggest that teachers, academics, and other education personnel working in contexts where there is little political recognition of environmental and climatic challenges in the first place, may be particularly vulnerable to the diverse impact of climate change on physical and mental health, due to the lack of information and the insecurity it causes.

2.1.1.2 Need for more accessible and relevant training opportunities

Thematically, education for environmental sustainability covers a broad range of topics, ranging from climate change (mitigation and adaptation), biodiversity, habitats and homes, ecosystems, water, air and soil quality, forests, to sustainable consumption and production (incl. waste, pollution, transportation), renewable energy resources, disaster risk reduction, food and similar. The themes themselves are interconnected and it is therefore always encouraged to approach them holistically, not only relating to environmental sustainability but sustainable development itself, at the intersection of engaging pedagogies, learning content and environment. Several studies point out the lack of available training opportunities for teachers who wish to develop a more comprehensive understanding of these topics and how to teach or engage with them effectively38.

The survey investigated the specific training needs of teachers, academics, and other education personnel in general and school leaders in particular. Literature suggests that training school leaders is increasingly important for mainstreaming EES in Europe and has been significantly overlooked in practice. The training of school leaders matters because this can help to further support education personnel and a positive school culture39. Training for school leaders and non-technical staff often covers environmental sustainability issues to an even lesser degree than in teacher training (e.g. Portugal) which is also a barrier to the whole-school approach to environmental sustainability40.

Research participants highlighted that teachers, academics and other education personnel are not prepared to teach EES or deal with the challenges they face due to the impact of climate change on their profession because of a lack of high-quality and accessible training opportunities. For example, in an internal survey by the GL trade union in Denmark, 61 % of the respondents requested more offers for CPD courses in this field, signalling that there is a high demand for short-term courses in particular. Survey participants’ views of barriers related to training can be seen in Figure 8.

In terms of quality, one concern was the need for courses on the topic to be based on the latest science and in line with the needs of education personnel and their students (e.g. dealing with climate anxiety) and the challenge of coordinators of CPD on EES not being sufficiently trained (e.g. Portugal and UK). In terms of accessibility, as explained by research participants, often education personnel can only access or participate in a certain number of trainings per year, and this depends on whether they must choose other courses of higher national priorities and on the hectic time schedules of teachers, academics, and other education personnel. Thus, accessing training opportunities is often not feasible in practice, even if courses are available. High-quality short-term courses are strongly needed.

Research participants reported that the most severe challenges were the lack of relevant ITE, CPD being organised outside of working time and lack of relevant and good-quality CPD opportunities. These findings should be read in conjunction with the prior noted finding that ETUCE member organisation representatives are most concerned about environmental sustainability issues negatively impacting workload, as lack of training exacerbates workload problems. There is a need for more easily available and good-quality learning opportunities. For these to provide real learning opportunities they need to be scheduled within working hours to prevent further mental and physical strain on teachers, academics and other education personnel. Survey respondents were most likely to say that the optional format of CPD was not a challenge at all, which again signals that the main issue is the lack of opportunities for education personnel rather than the lack of interest from them. The fact that respondents were more concerned about ITE as a barrier to EES than CPD, may be due to the slow changes in ITE and the slow overall impact on older teachers, academics and other education personnel who had their education before ITE curriculum reforms. The lack of ITE and CPD was considered a barrier to EES in all the ETUCE member organisations that answered the question.
In the survey, respondents ranked the training needs of teachers, academics and other education personnel – including school leaders. Research participants emphasised the need for education to teach an in-depth understanding of the need for action on environmental sustainability issues and how to facilitate holistic education cutting across disciplines and learning collaboratively across the whole institution and explained that this is needed to make the education more efficient and comprehensive.

In open-ended questions, respondents provided more details about the training needs of their members and how they may differ based on members’ backgrounds or qualifications:

“Our trade union members claim for more training on learning about environmental sustainability issues because this is such a vast topic that needs specialised knowledge. If you don’t know what you are talking about, you cannot plan classes with innovative activities and approaches.” (Portugal)

“There is scope for innovation and increased collaborative practice in education for environmental sustainability (...) CPD should be designed to ensure a deep change in teachers’ behaviours and practices regarding ESD.” (Ireland)

“Setting up educational buses to travel around the country to help children better understand the subject with the help of professionals in different areas.” (Turkey)

The research participants highlighted the acute issue of the lack of knowledge and training of the coordinators who run the CPD on EES, and high-quality EES reaching all learners. For example, in the ETUCE workshop, participants from Portugal further explained that although teachers are encouraged to attend 25 free hours of training every second year, lessons on EES are often not available – especially during the pandemic where all investments and training focused on digital education – and the CPD trainers are not prepared. A survey respondent in Ireland was concerned about the need to deepen the impact of EES through innovative approaches and pedagogies, while a Turkish survey respondent was concerned about the reach of EES to students and education personnel across the country and in distant rural areas.

Securing adequate and high-quality training on the topic is not easy though, as attested by a situation in Italy explained by participants in the ETUCE workshop. One potential solution to ensuring access is making CPD on environmental sustainability issues and teaching mandatory. In Italy, a law instrument about teacher training on EES was funded with COVID-19 recovery money but discussed without the involvement of trade unions. The representatives of the trade unions question teachers, academics and other education personnel’s professional autonomy in this case and highlighted the potential issues with making EES mandatory. More importantly, research participants highlighted the need to be involved in the discussion about the shape and requirements of the training to ensure that it is efficiently rolled out and meets their needs.
2.1.2. Challenges at the national, board and operational levels of education

2.1.2.1 Insufficient curricula, assessment frameworks and professional autonomy

Considering the increased workload and risks for health posed by environmental sustainability issues discussed in the previous section, education policies must be put in place to support teachers, academics and other education personnel. Figure 9 shows answers to the survey question about situations at the country level related to education policy that can act as barriers to implementing EES. The most-reported challenges were lack of priority within national assessments (only 3% reported that this was not a barrier) and insufficient curricula frameworks (only 7% reported that this was not a barrier). The lack of guidance from curricula and assessment systems is coupled with the lack of involvement of trade unions in the decision-making process in education policy.

FIGURE 9. EXTENT TO WHICH COUNTRY SITUATIONS ARE BARRIERS TO

<table>
<thead>
<tr>
<th></th>
<th>Not at all</th>
<th>To some extent</th>
<th>To a moderate extent</th>
<th>To a large extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>LACK OF PRIORITY WITHIN NATIONAL ASSESSMENTS</td>
<td>5%</td>
<td>35%</td>
<td>28%</td>
<td>35%</td>
</tr>
<tr>
<td>INSUFFICIENT CURRICULA FRAMEWORK</td>
<td>7%</td>
<td>24%</td>
<td>21%</td>
<td>48%</td>
</tr>
<tr>
<td>EDUCATION PERSONNEL NOT INVOLVED IN DECISION-MAKING</td>
<td>10%</td>
<td>28%</td>
<td>28%</td>
<td>35%</td>
</tr>
<tr>
<td>RIGID NATIONAL FRAMEWORKS (LACK OF DISCRETION)</td>
<td>10%</td>
<td>24%</td>
<td>35%</td>
<td>31%</td>
</tr>
<tr>
<td>LACK OF TEACHING MATERIALS</td>
<td>14%</td>
<td>14%</td>
<td>21%</td>
<td>52%</td>
</tr>
<tr>
<td>LACK OF REGULATIONS AND MEASURES FOR A HEALTHY PHYSICAL TEACHING ENVIRONMENT</td>
<td>17%</td>
<td>21%</td>
<td>35%</td>
<td>28%</td>
</tr>
</tbody>
</table>


Including environmental sustainability more comprehensively in the curricula and national assessments would signal the need for its prioritisation, funding, learning materials and time allocation further down the line. More than half of the respondents reported that, ‘to a large extent’, there is a lack of relevant teaching materials. Recent research finds that the general challenges in most EU countries are that the curricula rarely allow for cross-curricular exploration of the topics, but rather treat EES as an add-on subject – also signalling that it is not being taught comprehensively.

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Research participants from Cyprus and Portugal explained that EES is often taught solely from the perspective of the environment, not comprehensively as a more complicated ‘wicked problem’ requiring a strong focus in teaching on critical perspectives, anti-consumerism and all dimensions of sustainability (society, economy and environment).

It should be noted that there are differences between the countries where ETUCE member organisations participated in the survey and there has been an increasing push in some countries in recent years to improve curricula frameworks in this regard – consistent with the literature. Although there was not always agreement in the survey between ETUCE member organisations from the same countries about the situation, there were at least two discernible groups of responses; those who believed the main issue was the insufficient curricula and lack of rigidity coupled by resistance from policymakers (e.g. Poland, Slovenia, Turkey, and the United Kingdom) versus those who believed the main issue was the lack of teaching materials and interest among communities and teachers rather than issues with the curriculum and resistance among policymakers (e.g. France and Norway).

In addition, the story of Italy is particularly recent and relevant. In 2020, Italy became the first country in the world to make climate change education mandatory in all schools42. Teachers are required to include 33 hours of education about climate change and related topics in civics classes. Lorenzo Fioramonte, a political scientist and professor of political economy at the University of Pretoria and associate fellow of the Centre for the Study of Governance Innovation (GovInn), who helped develop the policy presented to the project workshop in Rome noted that in practice, this means 1 hour per week of learning as a part of the ‘green’ civics education. The lessons focus on projects and initiatives where students would become active citizens and become aware of what the local communities could do to change the environment and change the behaviour of themselves as well as those around them (project-based learning and self-assessment).

The policy has a transformative potential as it requires a better operationalised introduction of EES action competences in the curriculum, learning objectives and assessments and was developed bottom-up based on demand and broad political consensus, and was co-designed with youth. It has, however, faced challenges such as the difficulty to provide CPD and ITE to ensure that teachers, academics and other education personnel are ready to teach it. There is also an overall lack of funding to implement it and support schools in the transition. This shows that while curriculum change in many of the national education systems is needed, it needs to be accompanied by teacher training and provision of the support for teachers, academics and other personnel (including school leaders) as well as funding and support for schools. This was summarised by a participant to the ETUCE workshop as followed: ‘we need the resources for this to be possible: we can’t just increase the workload for teachers to do so: we must always bear in mind the working conditions of teachers: there has to be clear definition of how this work will be done, it’s important to give the right value to the work carried out by teachers’.

Thus, it is not surprising that other reported challenges in the survey included trade unions and education personnel ‘to a large extent’ not being included in the policy decision-making processes in the countries (35 %), as well as a lack of discretion within national education frameworks for education personnel to apply the curricula as suited to their local context (31 %). This shows that the teachers, academics and other education personnel wish to be more included in decision-making and to have their professional autonomy respected. In the case of teaching EES, the need for inclusion and discretion is important to ensure that teaching occurs in a locally adapted and community-oriented manner that is sensitive to local challenges43.

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A concern for professional autonomy and involvement was also widely reported in the ETUCE workshops. Several participants commented that professional autonomy and respect for the profession is under pressure in general which discourages teachers from working and being creative in their teaching. A participant in the ETUCE workshop from Cyprus highlighted that this may be worse in countries where the education system is especially attuned to create competitive environments focused on passing exams with little room to introduce additional topics that are not already defined in the curriculum or collaborating with teachers across subjects to create engaging lecture and content from cross-curricular perspectives. Rigid national frameworks and lack of discretion is likely perceived particularly negatively when teachers also feel that they do not have a say on curriculum development.

Research participants raised concerns regarding the impact of the lack of curricula and guidance for education personnel on the quality of education. When there is a lack of curricula and guidance, education personnel tend to turn to online learning platforms to search for additional resources and to fill the gap in their knowledge. In some countries, the education ministries and municipalities are heavily involved in designing and assuring the quality of such online learning platforms and their content (e.g. Sweden and Barcelona, Spain). However, in countries where this is not the case, e.g. in Estonia, learning platforms run by private technological or industry companies with specific vested interest, sometimes provide fabricated or ‘greenwashed’ learning lessons with information meant to misguide or misinform on climate change. This potential challenge signals the need for linking education for environmental sustainability with critical thinking skills, as highlighted by the European Green Competence Framework for Sustainability, to ensure that critical thinking is considered as a key skill to be taught for teachers as a part of lessons on core sustainability competences. This focus would also strengthen teachers’ ability to support students in manoeuvring false information online.

2.1.2.2 Lack of political vision and serious investment

The lack of prioritisation of the topic among governance actors as a major barrier to mainstreaming EES more widely, like the lack of assessment mechanisms for EES is ultimately proof that the topic is not a political priority in education. Overall, the impression of the trade unions is that politicians across the European region are not doing enough to mainstream good practices across countries to transform the education system in a sufficiently comprehensive manner to respond to the green transition envisaged in the labour market and the need for every citizen to develop a sustainability mindset from an early age. As an example of this, research participants highlighted the lack of linking education to the SDGs and SDG 4 on education for sustainable development in key sectoral documents on the green transition, as this also signals a lack of understanding and prioritisation at the national level of the need to meet the demand for skills for the green transition with EES.

Like other institutions, education institutions are equally part and parcel of the climate change crisis, contributing to global warming on the one hand and being drastically affected by it on the other. As an increasing number of natural hazards such as heatwaves, floods and pandemics hit Europe, education institutions are forced to close temporarily or move to online learning. The use of energy to maintain school buildings and universities, sustain online learning and the need for cloud power to support IT systems may further add to communities’ greenhouse gas emissions and exacerbate climate change, and may be particularly challenging in light of the ongoing energy crisis. Schools have become arenas themselves for political contestation around climate change targeting both institutions and society more broadly (e.g. ‘Fridays for Future’) and in many ways also arenas for change and problem solving locally.

Figure 10 shows responses to the online survey question that asked ETUCE member organisations about potential challenges at education institutions that are barriers to implementing Education for Environmental Sustainability.

**FIGURE 10. EXTENT TO WHICH SITUATIONS AT INSTITUTIONS ARE BARRIERS TO EES**


The most severe complaints in the survey were the lack of financial investment (55%) and appropriate classroom infrastructure (49%) and lack of time to design lessons (45%). With an increasing focus on whole-institution approaches and reforms as opposed to system reforms since the 1990s, several European countries moved towards autonomy signalling trust in education institutions’ abilities to promote educational innovation (e.g. Finland and Poland). This has in many cases signalled respect for the professional autonomy of education personnel and school leaders, but has also often been accompanied by increasing accountability mechanisms and performance indicators that contribute to harsher competition between educational institutions and, especially if coupled with privatisation and less funding. A recent mapping study of education for environmental sustainability in Europe and a study by the European University Association (EUA) confirms lack of financial investment in education as being a major issue, especially in a context of declining levels of public funding for education in parts of Europe and teacher shortages. Cost was the most significant factor in implementing greening measures by most of the higher education institutions surveyed by EUA.

It should be noted that the extent of lack of prioritisation from the top down differed from country to country. For example, where Italy sees a very active top-down approach to EES, Hungary sees little top-down action on the topic – either a sign of lack of political vision in this area, or a sign of a more bottom-up approach to policy development on these issues where industry and other third-party stakeholders hold more power over the direction than policy and state actors. Participants of the ETUCE workshops, especially in the Southern European countries, confirmed that the lack of financial investment in education is a serious cause of concern for them, especially when it comes to introducing new topics such as EES and innovative teaching for it that has an impact.

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Specific concerns raised by research participants were the lack of attention to public funding in the Proposal on a Council Recommendation on EES, as well as the share of the European Green Deal funding being earmarked for the social including educational dimension being too little compared to the tasks at hand (EUR 145 billion of EUR 1 trillion on the Just Transition Mechanism).

**Figure 11** shows an overview of public spending on education from primary to post-secondary non-tertiary education and tertiary education as a share of GDP among the ETUCE member organisations that are OECD member states. It shows indeed that the investments in education vary significantly, and that the Southern European countries have lower levels of investment in education than Central and Northern European countries across levels.

**FIGURE 11. PUBLIC SPENDING ON EDUCATION AS A SHARE OF GDP, OECD, 2019**

2.2. Actions enabling ETUCE member organisations to support their members and the green transition

This section discusses actions taken by trade unions to support and build the capacity and knowledge of their affiliates to address environmental sustainability issues in the education sector. As noted by one workshop participant from Italy: ‘we need to go beyond the existing barriers; we need to provide more than just knowledge but also how to act on it,’ and this lesson is just as important for ETUCE member organisations as for those in education and training. Trade unions have powerful and unique methods available for social change, of which social dialogue and collective bargaining are the most pronounced tools. Despite the readiness shown by some ETUCE member organisations, the role of trade unions is rarely commented upon in research on environmental education. Multi-stakeholder collaboration that focuses on societal deliberation has been an integral part of the promotion of EES in Europe, but the role of trade unions has not been considered in monitoring reports nor the overall literature.

2.2.1. Strategic level: policies and priorities

In response to global challenges for trade unions such as the declining strength and influence power, a vast academic literature has considered trade union revitalisation and renewal based on the assumption that trade unions have an important degree of control over their destiny. Strengthening the capacity of trade unions to support members in education who face challenges related to environmental sustainability issues and measures, will require going beyond traditional topics of working hours, pay and incentive systems. Trade union consultations by ETUCE have previously noted that in many European countries the trade unions are focusing primarily on working conditions in their efforts to improve the situation in education, and less on discussing the importance of updated and accessible ITE and CPD which can help to improve teachers, academics and other education personnel’s resilience and capacity. Thus, as seen in Figure 12, the survey asked about the policies of trade unions to address environmental sustainability and barriers and enablers to policy renewal in their local contexts.
Developing comprehensive policies on environmental sustainability, as well as redirecting collective bargaining priorities for this purpose, has occurred in about a third of the participating ETUCE member organisations. Thus, to address the diverse negative impact of environmental sustainability issues on employees has yet to be considered actionable through more traditional and, potentially, more powerful means of action or the key to trade union policy documents more broadly in the ETUCE member organisations. More than half of the respondents that report that their trade union does not have a comprehensive policy in place at all, attribute this to environmental sustainability not being a priority for the trade union or its leadership.

Although more overarching strategic action is not taking place, the survey findings show that the ETUCE member organisations participating in the survey have to some extent increased their overall activity on building capacity on environmental sustainability. The most-reported policy and priority on building capacity for respondents were to ‘increase the scope and delivery of actions’. As many as 93% of the respondents stated that this is to ‘some’, ‘moderate’ or ‘large extent’ occurring. However, only 10% did so to a ‘large extent’, and there were expected clear differences between countries of the ETUCE member organisations - though it is hard to see trending differences between welfare regimes and capitalist regimes. A better explanatory factor may be the type of industries in the countries, and whether these are fossil or renewable energies. In general, across the questions on policies and priorities, there was little action in the Czech, Polish, Romania and Slovak ETUCE member organisations although some action has taken place at the higher decision-making body of the trade union. There was also little increase in activities and strengthening of policy priorities in some Mediterranean ETUCE member organisations in countries such as Cyprus, Greece, Israel, Portugal, and Spain.
Research participants explained that stronger action is not taking place in the trade unions because of the difficulty or unwillingness to fit the topic into the traditional trade union agenda on working conditions, labour rights and pay among members and/or leaders of the trade union. The unwillingness among members was noted in the open-ended questions to the online survey, as well as in the open-ended questions to the internal survey by the GL trade union in Denmark. In GL’s study, although most (89%) of the respondents were interested in the trade union pushing the agenda of environmental sustainability in education, a minority of 9% were strongly against the trade union venturing out beyond its territory of working conditions and pay, and quite vocal about the risks of this move in the open-ended questions. Respondents worried about the impact of such measures on the effectiveness of the trade union considering its minor budget and the risk that environmental sustainability efforts focusing on influencing society would be diluted and result in less focus on working conditions (core issues) or increased prices for members. The financial capacities of trade unions to take upon themselves this topic was also a concern among several workshop participants.

Furthermore, there is a lack of urgent priority within the trade unions on environmental sustainability due to the constraints and difficulty leaders or negotiators face when fitting the topic into the usual agenda among other priorities. In the ETUCE workshops, participants attested that it is challenging to fit these topics into the agenda and to be able to include this matter in the negotiations on the national level without the political commitment of governments and education employers. A participant from Cyprus explained that the volatility of electoral politics makes it extremely difficult to have a sustained level of political support and funding and that trade unions need to insist on funding envelopes which are not dependent on the political parties in order to adopt and change their policies and practices in this area. It was explained that in a lot of jurisdictions in the European region, there is not yet political acknowledgement of the immediacy of the climate crisis. Although there are governmental proclamations, these are not followed up by resourcing or explicit recognition of the role of education and trade unions in addressing the climate crisis. Thus, ETUCE member organisations struggle to find the right format to discuss and negotiate the topic with the social partners.

Overall, the challenges highlighted in the ETUCE workshops which limit trade unions’ effectiveness in policymaking on the topic were 1) limited human and financial resources in the trade unions (not all trade unions can afford working groups); 2) lack of cross-sectoral communication on environmental sustainability and climate change priorities; 3) controversy regarding the use of the trade union action to address climate change; 4) lack of sufficient data regarding the views and needs of their affiliates on addressing environmental issues; and 5) overall weak social dialogue. Research participants mentioned that the trade unions are perfectly placed to deal with the working conditions and investments in educational institutions, and these perspectives are also crucial to ensuring impactful and holistic EES. Thus, it is not surprising that several research participants stated that they are in the explorative phase of policymaking on how to deal with the climate emergency in education beyond working conditions and pay and that they would have devoted more resources to it if the trade union had more funds, dedicated staff and time available.

Lastly, research participants mentioned that ‘slow’ action on EES in the trade unions’ policies and priorities may not be a negative thing per se as the trade union may need to proceed with caution through the exploratory phase to gain ground and strength in the area over time. This could mean that the trade unions are taking care to listen to all voices and carefully develop policies on the situation. For example, in the Belgium trade union ACOD a working group has been meeting regularly to discuss the trade union’s approaches to addressing the topic of environmental sustainability. There have been discussions on whether ACOD should join the student strikes or not considering the risk of taking over the campaign from the students. Furthermore, there may be inherited inequality in the voices from the youth on the matter, with only the most outspoken and resourceful who can pay for public transport to demonstrations, having a say in the matter. Without consensus in the trade unions themselves on policies and priorities, and without listening carefully to different voices, the trade unions may not fairly represent their members or be effective in their work. This is particularly challenging if there is also no political consensus on the topic of climate emergency, in the society in general (e.g. Slovenia).
FIGURE 13. IMPORTANCE PLACED ON ENVIRONMENTAL SUSTAINABILITY IN ETUCE MEMBER ORGANISATIONS: CHANGE OVER LAST 4 YEARS


Positively, Figure 13 shows that the importance placed on environmental sustainability has increased over the last 4 years (73% of the respondents covered by the survey). In one out of four participating trade unions, the importance of sustainability issues did not grow over the last four years. The importance decreased in only one of the 40 participating countries (Greece). The 10 countries where it did not change were Albania, Armenia, Cyprus, Czechia, Germany, Israel, Lithuania, Portugal, Serbia, and Slovakia. The following statements from open-ended questions elaborate on the causes of the positive processes taking place in some of the ETUCE member organisations. They attest to the power of trade union-led and societal declarations of climate emergency, media, training of internal staff, collaboration with other trade unions and students.

**Causes of positive action on environmental sustainability in ETUCE member organisations:**

- The influence of student-led climate actions (Ireland)
- Declaring a climate emergency, providing resource and training for members, prioritising decolonising and decarbonising work were all passed as mandates by members at trade union congress. The passing of these policy mandates has ensured some staffing capacity is provided by the trade union (UK)
- Trade union collaboration with other trade unions (Cyprus)
- Skilled staff and awareness by trade union members on environmental issues (Albania)
- General raise of awareness (in the public) on the extreme importance of this topic (Slovenia)
- Along with global warming caused by capitalist exploitation, environmental disasters such as floods, forest fires, droughts and epidemics are increasingly threatening the ecosystem (caused awareness) (Turkey)
The list below summarised the main approaches and principles behind the positive change and actions taken in a Swedish ETUCE member organisation, Lärarförbundet, as presented in the Copenhagen workshop. The examples from this trade union illustrate the actions and processes behind trade union work on the topic that have moved beyond the exploratory phase and towards more transformative approaches targeting change both strategically outwards and inwards from the trade union itself. Strategic objectives on the agenda of the trade union (e.g., reducing GHG emissions) is followed up with policies and incentives to reduce transport emissions of members, while the trade union tracks its own progression through official sustainability reporting and corporate responsibility mechanisms.

- **Principle 1**: Connect the local, national and global agenda on the SDGs and aim to always empower local communities that are lagging or disadvantaged.
- **Principle 2**: Accept and ensure that the teaching materials follow the national curriculum to be consistent, transparent and not increasing the scope of the work.
- **Principle 3**: Invite inspiring speakers and experts who know and say it better and can motivate both very active and more passive members around environmental sustainability.
- **Principle 4**: Practice what you preach and ensure that sustainability becomes a key feature of the operations in the trade union and a principle to follow, track and move towards strategically.

### 2.2.2. Practices and day-to-day activities

Some of the good practices of trade unions engaging with the topic of sustainable development are occurring through cross-sectoral broad alliances (e.g. Danish trade union DLF managing to introduce education environmental sustainability in the collective agreement thanks to the cooperation of the trade unions in the public sector). This suggests that there is room to explore possibilities for this type of action in the future for the trade unions. There is therefore a need for ETUCE member organisations to learn from each other on what works and become motivated to invest more time, staff and overall effort in sustainable practices, projects and social dialogue, in order to advance their effort and make it both impactful and sustainable. Thus, this section focuses on the practices of trade unions and early innovators that can serve as inspiration for other trade unions.

First, the survey asked respondents about the forms of actions trade unions use to build their capacity for environmental sustainability (Figure 14).
Research illustrating the increase of overall environmental initiatives, but also the demand for more and better initiatives, is available from the ETUCE member organisation Gymnasieskolernes Lærerforening (GL) in Denmark. In their internal survey on climate measures and education of their members, 67% of respondents reported that their schools have implemented various climate measures in their operations in the last 2 years ranging from strategic measures to reduce energy consumption, recycle and reduce waste. The same respondents reported that schools organised education around climate change less frequently, though this was potentially due to the topic already being covered to some extent in various subjects. At the same time, 72% of the respondents emphasised that they would to a ‘large extent’ or ‘very large extent’ prefer that their schools make clearly environmentally conscious decisions for both the education and working environment in the schools. Most of the respondents also agreed to a ‘high’ or ‘very high’ degree that the trade union should fuse climate change considerations into the operations of the trade union itself and work together with employers and governments to ensure that schools take more climate considerations into the operations and working environment of the institution and that students be empowered to know about and act on climate change.

The most frequent forms of actions revolved around the dissemination of information: thematic events (42%) and publications (39%). Open-ended questions attest that several trade unions gather data about the impact of environmental sustainability issues on their members and assess teachers, academics and other education personnel’s needs in this regard to share and learn. Close to 80% report that the trade unions exchange good practices to raise awareness and one in five reports that this occurs to a ‘large extent’. Looking at the more traditional measures such as striking, these were less frequently reported (10%), although preparing trade union representatives for negotiations did occur (37%). This is reasonable given that the strike is the highest and ultimate form of protest if negotiations fail. Thus, although the student demonstrations for action against climate change was reported as a positive influence by several research respondents, striking and protesting is less likely to be reported by survey participants as occurring frequently.
It should be noted that protests can take different shapes and are carried out in different ETUCE member organisations. A protest is understood as an expression or declaration of objection, disapproval, or dissent, often in opposition to something. While the research does not provide in-depth information about the full nature of the trade union protests, the following methods are known: 1) showing support to the ‘Fridays for Future’ protests online or by joining the protests; 2) proclaiming a climate emergency as a statement; 3) creating a pact with the members and other stakeholders for example through signatures or letter to target politicians more systematically over time. Research participants reported that trade unions have taken inspiration from the youth protests and demonstrations, but only in the case of Italy was there a strike in relation to EES. On Friday, 25 March, the Italian trade union FLC-CGIL organised a full-day strike for all the staff of the “Education and Research” sector and the Management Area, university professors and all the staff of vocational training and non-state schools. It was organised in collaboration with Fridays for Future. In the past, the trade union has also been very active by, for example, initiating the Climate Action Week in relation to a global strike in 2019 as well as several campaigns on energy efficiency and saving.

In the Slovenian ETUCE member organisation ETSUS, the trade union started with information-sharing to inform and make the trade union members more aware so as to change the more fundamental policies over time. The participant highlighted that the green transition is challenging because to make the transition just, the key question is whether the transition can be made in such a way that the interests of capital remain unchanged, or whether it is possible to keep the relationship between capital and labour unchanged. The trade union representative felt that more drastic measures, such as the four-day working week which not only has an impact of reducing emissions into the atmosphere, but also addresses the issue of the automation and robotisation of society, were needed and that it takes a longer time and more awareness raising to achieve such drastic changes in the labour market. In the ETUCE workshop, several good practices of information-sharing were presented, with diversity in the effort to target social partners and the government. Simply sharing information on social media and with members, although important, does not constitute social dialogue per se as it is not strategically targeting negotiation.

One particularly good example of a strategic information-sharing effort has been implemented by the Spanish trade union Federación de Enseñanza de CCOO. The trade union implemented an awareness-raising campaign just before the pandemic that targeted the entire education community: regional governments, Spanish national government, local administration and governments as well as the wider society in different parts of the country. The thought behind the project was that individual actions can impact the future if linked to global and government actions. Teachers, academics and other education personnel are crucial actors in raising awareness among students and their communities. The campaign focuses on different educational demands: measures in vocational training; materials used in school should be environmentally friendly – reusable, from recycled materials, more plants and less meat (school canteens) etc.; and ensuring carbon neutral mobility; the environment should be addressed in a holistic way: energy consumption and water recycling (e.g. recycle rain water) is paramount; financial support for environmental measures; all schools should have an environmental sustainability plan. It was successful in the sense that in some regions, all the asbestos in the school buildings was removed. In others, nothing has been done yet. FECCOO plans to collaborate with some municipalities to ensure that schools generate their own energy and adopt holistic all-encompassing school plans.

Figure 15 presents an overview of answers to the survey question on the extent to which ETUCE member organisations address environmental sustainability issues in their practices.


53 Federación de Enseñanza de CCOO (2022) FECCOO presenta la campaña “Emergencia Climática” a otros sindicatos de la IE: https://fe.ccoo.es/noticia/630577- FECCOO_presentation_emergency_climatic_to_other_sindicataes_of_the_IE
In line with the finding in Figure 14, few respondents reported that their trade union provides training on climate change or environmental issues for its members. More than half of the respondents report that their trade union does not provide any training on climate change or environmental issues for its members. Only 10% do this 'to a large extent'. Some of the good practices highlighted by the study indeed included examples of trade unions that provide training for their members and share good practices. In Denmark and Italy, ETUCE member organisations have offered training or funding for training for their members. One trade union that has taken a big step towards developing and providing programmes for members, however, is the Irish National Teachers' Organisation (INTO).

The INTO has taken several steps to engage in and support EES development internationally which has contributed to learning opportunities for its members on sustainability action. The INTO Global Solidarity policy is made up of the three pillars of campaigning, action-based learning and volunteering that work in conjunction to advance educational standards, human/trade union rights and decent work worldwide:

1. INTO Global Solidarity Network lobbies and campaigns for teachers’ rights worldwide.
2. INTO Solidarity Fund supports teachers volunteering abroad and other educational projects abroad
3. Global Citizenship Schools support primary schools in learning about and acting on local and global issues.

54 INTO (n.d.) INTO Global. Available at: https://www.into.ie/about/our-structure/associated-groups/into-global
Overall, the INTO has taken an active role in addressing the topic of environmental sustainability supporting their affiliates by providing professional development courses (e.g. Global Citizenship School), informing them through various communication channels (e.g. Intouch monthly magazine), communicating with their affiliates on the topic (e.g. discussion groups at the national education conferences and National Committee of education personnel), and collecting information on their needs via surveys. The INTO also lobbies the Department of Education to ensure environmentally friendly school infrastructures and transportation, and provision of CPD for education personnel in the context of the new curriculum.

In this context, the INTO designed a CPD course for teachers on sustainability and a summer course on global citizenship for its members and is thereby very active in improving the capacity of teachers, academics and other education personnel to meet and educate others on environmental sustainability issues. In addition, the INTO leads a lobbying campaign each year commencing in June with members engaging with their representatives at a local level and INTO staff members meeting with members of parliament at a national level to impact the curriculum priorities at the national level. INTO’s approach to supporting their members follows a 5 C model: communication; consultation; collaboration; coordination and creation. The trade union actively shares resources for teachers, academics and other education personnel in different contexts and engages in partnership with other organisations. The INTO supports the Self-Help Africa initiative with the One Million Trees project in which all schools across the country were encouraged to get involved to help tackle climate change by planting one million trees.

Another good example of education and training took place at the Romanian trade union FSLE in support of the Green Schools Erasmus+ Project. The trade union created a training course for teachers: methodology for organising and implementing a short qualification course for primary teachers to deal with the challenge that in Romania teachers are not motivated to organise activities outside of the school. In the pilot, 10 primary teachers and 250 students per partner country were engaged. A handbook is being created and will be distributed.

The Portuguese trade union FNE’s work in this area is particularly comprehensive and carried out through their AFIET (Association for Training and Research in Education and Work), which in addition to teachers, academics and other education personnel also targets a much wider audience of workers and civil society. This sub-group focuses on sustainability and environmental education activities and aspects directly related to students, schools, curriculum, and the availability of training to their associates. The objective of AFIET has been to introduce environmental education in schools, and educational communities, making it a theme of primary reference for trade unionism of the present and the future, always with the aim of making the Earth a greener planet. Furthermore, a clean-up action is planned on the beaches near Lisbon, with directors, associates, and students from local schools.

AFIET’s work is based on three main axes:

1. Continuous face-to-face training, both for workers in the Education and Training area and for other workers.
2. The promotion of initiatives within the framework of training for Sustainable Citizenship.
3. The development of Channel 4’s activity, based on continuous online training.

One initiative FNE considers especially relevant in the organisation of its work is the existence in each of the 10 FNE trade unions (seven of teachers and three of ESP) of a so-called Environment Ambassador. Environment Ambassadors have been in existence since April 2021 and help mainstream sustainability practices in the trade union and also offer advice on sustainability issues to schools, students and educational communities through consistent pedagogical actions, making the Earth a greener planet.
One good example of the trade unions collaborating cross-sectorally is The Pact of the Power to Live in France (Pacte du Pouvoir de Vivre). This is a civil society alliance initiated in 2019 by the French trade union CFDT along with 18 other organisations against the backdrop of the yellow vest movement and climate demonstrations. It has 65 member organisations and nearly 35 active local groups. It started with the initiative to create proposals on how to respond to the social and ecological emergency of the country by changing the political and economic development model. In the first months, the alliance agreed on the content of the pact and consolidated it through joint actions such as press conferences and meetings with political parties and elected officials to increase the number of groups to join the pact. The alliance shared its proposals with the prime minister. While waiting for the prime minister to act, CFDT launched a tour of France to highlight the actions of the local groups. The pact is an attempt by the trade union to engage in the debate combining social justice, ecological transitions and the fight against inequalities. While being a good example of protest action, it is also an excellent but rare example of cross-sectoral alliance building.

FIGURE 16. EXTRACT FROM THE WEBSITE OF THE PACTE DU POUVOIR DE VIVRE

The online survey asked respondents to list actors that initiate EES in their countries. Respondents were least likely to suggest institutional management boards and leaders and reported that students, government and educational authorities most often initiated it in educational institutions. Several workshop participants from Western European countries mentioned student groups as a key actor and motivator for changing practices. In the example of the UK and the trade union NEU, students even participated in training and peer learning sessions for teachers and in a training with education personnel on climate anxiety. A workshop participant from Denmark mentioned that the labour market sector and green and digital industry is also pushing educational institutions to change. While the latter was not frequently mentioned in the workshops, it could signal that in Denmark, collaboration between actors for changing
Education for social change: the role of education trade unions in addressing sustainable environmental development

and providing relevant education and support to education systems on this topic as well as engaging in cross-sectoral collaborations and social dialogue on the topic is easier. This is most likely because the influence on the education sector is more horizontal and from policy, industry and society, and the energy sector has more widely adopted to renewable energy and digitalisation in line with the visions of the European Green Deal.

While the previous section found that sustainability is not extensively enshrined in trade union policies and priorities, Figure 15 suggests that management and facilities have nevertheless started to reflect some sustainability principles in practice. For example, the Sgen-CFDT trade union in France reports that all individual water bottles have been eliminated, waste is sorted within the federal apparatus and teleworking opportunities have been developed to reduce travel. The SNuipp trade union (France) has implemented the mandate of social responsibility that it shares with the FSU trade union federation. This means that in every district, they organise local conferences where the needs and interests of members regarding environmental sustainability. SNUipp has thereby recognised the urgency to prepare teachers to address this topic in their work but also in their everyday activities and consumption habits in the day-to-day work of the trade union. A crucial topic for SNUipp members is the infrastructure of the educational institutions as classes are often not ventilated properly and the infrastructure is not environmentally friendly. At the moment, SNUipp focuses its work on the commitment of their own trade union staff and members being conscious of their footprint, use of paper and alternative types of transportation rather than engaging in the topic through social dialogue.

The survey asked respondents to share experiences about their practices on supporting teachers, academics and other education personnel to deal with the impacts of climate change threats and engaging in EES. Table 3 contains an overview of the practices and experiences gathered from the survey responses and desk research.

**TABLE 3. EXAMPLE OF GOOD PRACTICES**

<table>
<thead>
<tr>
<th>Country</th>
<th>Trade union</th>
<th>Description</th>
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<tbody>
<tr>
<td>Belgium (Flanders)</td>
<td>ACOD-Onderwijs</td>
<td>The trade union has chosen a specific environmental theme to focus on – air quality. Together with the experts (virologists, epidemiologists etc) during the COVID period, the trade union managed to put air quality on the agenda of the social dialogue with the ministers and on the social dialogue in every school under the motto 'in every class a CO₂ meter'. The trade union shares information about air quality issues on its website to raise awareness among teachers, academics and other education personnel.</td>
</tr>
<tr>
<td>France</td>
<td>SNUIPP FSU</td>
<td>The trade union has launched a commission to study the ecological transition of activism to explore its importance and relevance for the trade union’s work.</td>
</tr>
<tr>
<td>Hungary</td>
<td>PSZ Hungary</td>
<td>Occupational health and environmental assessments of employers are now being carried out to explore the impact of environmental sustainability issues on teachers, academics and other education personnel in the country.</td>
</tr>
<tr>
<td>Ireland</td>
<td>Teachers’ Union of Ireland</td>
<td>The trade union has formed an advisory committee of active members to advise the trade union’s Executive Committee on actions to take to further environmental sustainability goals.</td>
</tr>
<tr>
<td>Scotland</td>
<td>Educational Institute of Scotland</td>
<td>The EIS carried out a carbon audit around 3 years ago that illustrated the amount of wasted paper and resources generated by the trade union. The information was shared within the trade union and used to plan strategies and change practices towards sustainability within the trade union. The EIS was involved from an early start on the Scottish Government programme to embed sustainability issues into the curriculum - the Learning for Sustainability Programme. This engagement has helped its introduction in schools. There is a Learning for Sustainability Network run by the Scottish Government and the trade union as well as many other education stakeholders take part in the network to share and learn from each other.</td>
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<thead>
<tr>
<th>Country</th>
<th>Trade union</th>
<th>Description</th>
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<tbody>
<tr>
<td>Slovenia</td>
<td>ESTUS</td>
<td>ESTUS has so far joined the activities of Education International and ETUCE in highlighting the key role of education and staff in kindergartens and schools in relation to environmental issues. ESTUS has strongly supported activities to protect the environment and our planet, explicitly since mid-March 2019, when environmental protests were initiated by Swedish activist Greta Thunberg in more than 1,650 cities in 105 countries. At that time, ESTUS highlighted the urgent need to integrate a holistic approach to environmental issues in the curriculum from pre-school upwards and announced that they would insist on these issues being included in the new White Paper on Education in the Republic of Slovenia. ESTUS supported the demands of Youth for Climate Justice and employees in education, science and culture actively joined the ‘Climate Strike: Together for Climate Justice’. During its congress in November this year (2022), ESTUS is planning to propose the adoption of a special resolution on sustainable development and climate change.</td>
</tr>
<tr>
<td>Spain</td>
<td>Enseñanza UGT Servicios Publicos</td>
<td>The trade union is involved in several projects on educational sustainability, and they are so far focusing on recycling in school. In addition, the trade union has produced engaging material informing on measures to address the climate emergency. The material is colourful and also appealing to younger students to show solidarity with the youth movements such as ‘Fridays for Future’.</td>
</tr>
<tr>
<td>UK</td>
<td>University and College Union</td>
<td>The trade union offers regular CPD to members on climate learning / education for sustainable development / running climate learning events / decarbonising and decolonising. There is also a Green Representative network for members to join and connect with other members, a slack workspace for Green Representatives and an annual conference. Participation in SOS-UK programmes such as ‘Responsible Futures’ has helped gain senior leadership buy-in, ensure students’ voice and provide a framework for embedding sustainability in teaching and learning in the trade union.</td>
</tr>
</tbody>
</table>

ETUCE Online Survey October-December 2021, N: 8.

2.2.3. Unique tools: social dialogue and collective bargaining

Social dialogue and collective bargaining are the most pronounced and powerful tools of trade unions. Through collective bargaining in education, trade unions create room for teachers, academics and other education personnel to assert themselves and have a say on their working conditions and address challenges such as workload which significantly reduces their capacity to deliver education for sustainable environmental development. The previous sections confirm that in some countries, trade unions have been at the forefront of advocacy and demanding healthy and sustainable workspaces, time and space for topics such as values, climate change and the critical thinking capacity needed to navigate disinformation around it. This section presents the extent to which ETUCE member organisations address the issues of environmental sustainability through social dialogue and the nature of the innovative social dialogue.

Figure 17 shows that social dialogue on the topic of environmental sustainability took place in about half of the ETUCE member organisations that participated in the survey (34 % of all ETUCE members participated in the survey).

55 TUAC. ‘The role of collective bargaining as part of a comprehensive strategy to reduce income inequality’, Trade Union Advisory Committee to the OECD – Background Paper, 2015.
TABLE 1. SOCIAL DIALOGUE EFFORTS TO ADDRESS ENVIRONMENTAL SUSTAINABILITY ISSUES IN ETUCE MEMBER ORGANISATIONS IN THE LAST 4 YEARS

![Social Dialogue Efforts Pie Chart]

ETUCE Online Survey October-December 2021, N: 40

Figure 18 displays that most of the time, it took place once a year (40%) followed by once every third month (25%).

FIGURE 18. FREQUENCY OF SOCIAL DIALOGUE ACTION ON ENVIRONMENTAL SUSTAINABILITY IN ETUCE MEMBER ORGANISATIONS


The ETUCE member organisations that did not engage in social dialogue on the topic of environmental sustainability were diverse in terms of geographical location in the European region but represented primarily conservative, liberal or establishing welfare state typologies (no social-democratic) and regions where renewable energies are not the majority energy source. They were much more likely to state that their members did not engage in EES than the overall sample (16 percentage points difference) and much less likely to state that there is wider interest in it in the country (28 percentage points difference). Given the profile of these countries and the feedback from research participants, it is clear that social dialogue is not very strong or active in these countries in general.
Education for social change: the role of education trade unions in addressing sustainable environmental development

Figure 19 shows that these ETUCE member organisations were also more likely to state that the interest in environmental sustainability issues in their countries had not increased over the last 4 years (15 percentage points difference). This shows that regardless of trade unions not being involved in social dialogue, the importance placed on environmental sustainability increased in most of the trade unions. Due to the current energy crisis, EES may become an even more important issue on the school agenda as many places are considering lowering heating temperatures in school buildings, etc. to save energy.

Among the thematic areas addressed regarding environmental sustainability through social dialogue, the research participants most often reported action in the areas of health, physical working conditions and demands from education personnel, and least in relation to relevant teacher education and time management. Given that respondents considered workload as the area where environmental sustainability issues had the most direct negative impact, it may be surprising that less than half of the respondents reported that it is a thematic focus area when considering the impact of environmental sustainability issues on teachers, academics and other education personnel (44% in general activities and 50% in social dialogue activities respectively). This is due to the difficulty to fit the topic into the traditional trade union agenda (working conditions, labour rights, pay), the lack of willingness by employers to discuss it in the social dialogue, the lack of knowledge on the topic and its link to education and trade unionism, and the challenging (or non-existent) social dialogue in some countries especially in Eastern Europe which forces trade unions to prioritise what they bring to the negotiation table of which climate change rarely make it to the top three priorities.
Figure 20 shows that the most frequent form of social dialogue among the ETUCE member organisations was information-sharing (40%) followed by bipartite negotiation (25%), consultation (20%) and tripartite negotiation (15%). The most common way to share information is through trade union networks to raise awareness among workers representatives (See Figure 21). Almost half (45%) of the respondents stated that this occurs ‘to a large extent’. It must be noted however that for information-sharing to be counted as social dialogue, the information should strategically target employers and social partners focusing on a specific goal for the members of the ETUCE member organisations. There is a risk that the respondents to the survey simply considered information-sharing in general rather than the specific nature of information-sharing in social dialogue. This is also the impression for the ETUCE workshops, where there were few examples of strategically directed information-sharing campaigns (some are described in the previous section).
Figure 21 shows that the least common method to engage in social dialogue practice through collaboration is to engage in cross-sectoral collaboration to build broader alliances nationally during negotiations. While 40% of respondents state that trade unions ‘to a large extent’ collaborate internationally, only 15% state that they collaborate nationally in cross-sector alliances. That the respondents were more likely to collaborate internationally than nationally should not be overemphasised since the survey was likely biased towards trade unions that are more internationally minded and already a part of a wider international network like ETUCE and where they engage in regionally strategic negotiations and information-sharing to a large extent.

The more interesting finding is that the trade unions are not likely to collaborate with other actors of the civil society to create more broad alliances. Figure 22 shows that only 10% of the respondents claim that the community are involved as key actors in the social dialogue efforts of trade unions. Scholars and education policymakers highlight the importance of cross-sectoral collaboration for mainstreaming environmental sustainability education. Since most of the social dialogue efforts concerned information-sharing, it is not surprising that the most-reported actors running social dialogue are trade unions acting alone. This may also be due to sectors having different priorities, and such cross-sectoral collaboration not being a natural way of work for trade unions, but it could also be due to the lack of the necessary platforms and staff to engage in such cross-sector collaboration. The lack of involvement of trade unions in cross-sectoral national work may explain why the work on education for sustainable development only recently has reached the attention of many ETUCE member organisations and that there is a lack of awareness and interest in it in about half of the participating organisations to address it through social dialogue.

FIGURE 22. ACTORS RUNNING SOCIAL DIALOGUE ON ENVIRONMENTAL SUSTAINABILITY

Responding to the open question on the relevance of the social dialogue on environmental sustainability, survey respondents that were motivated to engage in social dialogue on this topic mentioned (3 answers) that it became necessary after EES became a part of the national education strategy (Czechia), that it was necessary to ensure a

socially just transition to a green economy (UK), and that there were a lot of possibilities for important work for the trade union (Belgium). These comments show that there can be diverse motivations, from top-down influences, intrinsic sense of urgency as well as opportunities for the trade unions to expand their working portfolio, develop the expertise areas of their members and stay relevant. It should be noted that most of the respondents that noted that social dialogue on environmental sustainability occurs in their trade unions, also reported wider interest in EES in their countries.

Respondents that reported that social dialogue does not occur in their trade unions were more vocal in the open-ended question on why this was the case (12 answers) but more unified in their answers. A common response was that other topics were more important or had higher priority and that there was a lack of vision for getting involved in this topic: ‘The trade union is facing many challenges regarding the working rights of teachers, academics and other education personnel especially in post COVID times so this issue has not yet been given the full attention’ (Israel). Another group of respondents elaborated more about the reason, stating that economic interest, salaries and more classical working conditions topics were the priority of the trade union: ‘Since social dialogue is mainly conducted on issues of increasing wages and improving working conditions’ (Ukraine). This is very much in line with the concerns voiced in the ETUCE workshops, where it became clear that it is difficult to fit the topic within the traditional trade union agenda and especially in countries where social dialogue is already not active due to lack of interest from employers and other social partners.

Finally, the survey asked to which extent the trade unions addressed specific issues in EES (Figure 23).

**Figure 23. Extent to which ETUCE member organisations address the following environmental sustainability education challenges in social dialogue**

<table>
<thead>
<tr>
<th>HOW TO ADAPT TO CLIMATE CHANGE</th>
<th>HOW TO MITIGATE AND ACT AGAINST CLIMATE CHANGE</th>
<th>HOW TO DIRECT THE CURRICULA TOWARDS ACTION COMPETENCES AND SKILLS</th>
<th>HOW TO STRENGTHEN ENVIRONMENTAL PERSPECTIVES INTERDISCIPLINARY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all</td>
<td>To some extent</td>
<td>To moderate extent</td>
<td>To a large extent</td>
</tr>
</tbody>
</table>


Figure 23 shows that the priority in social dialogue for the ETUCE member organisations is on sharing information and discussing education with partners regarding how education can support students and teachers to adapt to climate change and mitigate it. While the figure shows that all of the listed items are done to a large extent, please note that is reported to occur in only 20 out of 127 ETUCE member organisations. In a transmissive pedagogical approach, which dominates much of the European region’s education systems today, teachers play the role of deliverers of knowledge that the learners need to understand and reproduce during the exams or tests, and which may not benefit the development of action competences and sustainability mindset or behaviours. Thus, there should be more emphasis on social and
emotional, and behavioural learning dimensions\textsuperscript{57} and on developing action competences, which are important parts of comprehensive EES. To grow knowledge, skills, and attitudes relevant to creating sustainable behaviour, pedagogies must be adjusted to instil such behaviour\textsuperscript{58}. This links well to the earlier finding that the respondents note that teachers, academics and other education personnel’s education needs are more acute around action competences and interdisciplinarity. However, the survey findings show that the ETUCE member organisations that engage in social dialogue on environmental sustainability are more likely to focus on the topics that are closest to traditional trade union topics and the direct potential impact of climate change on teachers, academics and other education personnel rather than curriculum and teacher training reform.

\textsuperscript{57} Bourn, Douglas, Frances Hunt, and Phil Bamber. (2017), op. cit.
\textsuperscript{58} UNESCO Education Sector. “Educational content up close - Examining the learning dimensions of Education for Sustainable Development and Global Citizenship”. Available at: https://unesdoc.unesco.org/ark:/48223/pf000037237
Policy recommendations
Every year, the IPCC report warns of the ever more disastrous impact of climate change on the natural and human world. The European Green Deal (EGD) has set out the path to establishing a modern, resource-efficient and competitive green economy that requires action from all sectors and people. The war in Ukraine has increased cross-border solidarity and highlighted more than ever before the need for clean and affordable energy not just for the climate but also for security and self-sufficiency in the European region and to meet the ongoing energy crisis. The 2030 Agenda for Sustainable Development and the European Green Deal clearly reflect the urgency to embed Education for Environmental Sustainability (EES), into all levels of education and sustainability and climate change measures into the operational functioning of education (e.g. infrastructure, buildings, transport, etc). For the green transition to happen throughout society broadly and effectively, citizens need to have the competences and skills to contribute actively to the transition. Thus, it is crucial that education, training, and lifelong learning systems transition to environmental sustainability in education content, operations, and learning culture.

This section provides advice for national and EU policymakers on implementing the EES from the perspective of education trade unions. It builds largely on the findings discussed in the previous sections. While our recommendations are largely in line with the Council Recommendation for Learning for Environmental Sustainability, and the recommendations from UNESCO and OECD, they are unique in emphasising strongly the need for inclusion of education trade unions in the process of moving towards high-quality EES, and the need for sufficient public funding to meet the ambitions of EES and support teachers, academics and other education personnel in the times of an energy crisis and going forward.

1. Strengthen social dialogue and include trade unions in the discussions around EES and climate change measures in education

This study finds that in most of the ETUCE member organisations, across the European region, social dialogue in education does not cover the topic of EES. This is due to, among several reasons, the difficulty or unwillingness to fit the topic into the traditional trade union agenda on working conditions, labour rights and pay among members and/or leaders of the trade union, education employers and authorities. The challenges highlighted by ETUCE member organisations which further limit trade unions’ effectiveness in policymaking on the topic were 1) limited human and financial resources in the trade unions; 2) lack of cross-sectoral communication on environmental sustainability and climate change priorities; 3) controversy regarding the use of the trade union action for addressing climate change; 4) lack of sufficient data regarding the views and needs of their affiliates on addressing environmental issues, and 5) overall weak social dialogue.

Yet, education trade unions are a vital group that must be included in the discussion around EES and the impact of climate change on education to ensure that teachers, academics and other education personnel have a voice and are sufficiently supported in their important role to implement EES. This is particularly important in those countries where...
social dialogue is weak and where the education trade unions are rarely involved in decision-making in education. Involving trade unions could also help to ensure that teachers, academics, and other education personnel feel that their professional autonomy is respected – another key issue highlighted by the study. A good take-away from the study based on the example of Denmark would be to always include the education trade unions in curricula reform. At the EU level, regional education trade unions need to be consistently included in consultations around education reforms and EU level recommendations too.

2. Provide more clarity on how to teach and assess EES in the curricula and national assessment frameworks

Another concern of ETUCE member organisations is the lack of inclusion of EES in the curricula in a way that is relevant and helpful to teachers, academics, and other education personnel. Several of the ETUCE member organisations operate in very competitive and rigid education systems where it is almost impossible to introduce anything besides what is already in the curriculum and thus policymakers need to reform the curricula and learning material in this regard. In addition, there is a lack of logical linkages and guidance as to the design of educational objectives and learning outcomes regarding EES. A clearer theoretical underpinning for EES as well as more hands-on guidance is needed. Better-defined learning objectives are necessary to develop assessment tools which are also crucial to increasing the status and importance of EES in education systems. Defining learning objectives that link to transversal skills such as problem-solving or complex systems thinking, as has already been done at the EU level with the ‘GreenComp’ by JRC62, could also help teachers from various disciplines to better understand how they can design modules and learning scenarios for EES in an interdisciplinary manner – something which was reported as very challenging during this study. National level policymakers can take inspiration from the ‘GreenComp’ and the Council Recommendation for Learning for Environmental Sustainability63 when updating their curricula and assessment frameworks for EES.

This will require the promotion of the pedagogical and in-depth understanding of teachers, academics and other education personnel on the topic of environmental sustainability by engaging in social dialogue with the education industry stakeholder on how to reform the curriculum across education levels and formal and non-formal education, including teacher education, to ensure that it is comprehensively considering and integrating environmental sustainability in education and training offers and programmes and that these include explicit competence frameworks enabling concrete learning objectives and assessment methods.

3. Accompany educational reform on EES with adequate public funding and support to teachers, academics and other education personnel

Educational reforms are not likely to achieve meaningful change without an adequate delivery system, such as sufficient funding, working conditions and human and administrative capacity to implement the reforms. This study shows that there are grave concerns about the lack of public funding and proper working conditions (e.g. pay) which would support teachers, academics, and other education personnel, institutions and communities in taking an active part in EES. In particular, it is crucial to address the challenge of teacher and staff shortages overall as it strongly influences the possibilities to implement EES. Currently, the public funding is not aligned with the ambitions of the EES agenda, which is a cause for concern as it may lead to the further fatigue and burnout of teachers, academics and other education personnel, especially considering teacher and staff shortages, the ongoing energy crisis, and the ambitions and demands put on teachers, academics and other education personnel. Public investment and engagement in education, both formal and non-formal, is thus crucial to ensure that the ambitions of the EES agenda are reached, and the teachers, academics and other education personnel are supported to implement the changes not just in the classroom but in their whole institution and with the wider community. The current energy crisis may negatively impact education institutions, their budgets, teacher recruitment and retention, and public funding is therefore even more crucial to support education institutions in these times, to not risk that headmasters must choose between heating and hiring.

4. Ensure consistent and high-quality training opportunities for teachers, academics, and other education personnel

This study has found that the lack of accessible and high-quality training for teachers, academics and other education personnel is one of the main reasons why EES is not systematically introduced in education systems across the European region. At the same time, there are examples of education trade unions being frustrated at not being included in the discussion about mandatory training and at the fact that the mandatory training is not of high enough quality. Specifically, there should be a focus in EES training on preparing teachers, academics, and other education personnel to be resilient and on providing them with the tools to deal with potential climate anxieties. The study highlighted in particular the high need for high-quality short term CPD courses. The coordinators of CPD and ITE also need to be sufficiently trained. In the courses, there should be a focus on how to deal with the most important but difficult issues in EES such as teaching action competences and teaching it inter-disciplinary and through the whole-institution method. Besides, it is also crucial to foster the attitudes, values, knowledge and behaviours necessary to promote sustainability.

64 Bygrave, A (2022). How will the energy crisis affect schools? Teach First. Available at: https://www.teachfirst.org.uk/blog/energy-crisis-schools
among leaders and staff of all education institutions including teacher education institutions, non-formal education and private education companies, and ensure that tailored training is available for all education personnel. From the perspectives of ETUCE member organisations in particular, it is important that the training equally emphasises the social, economic, and environmental dimensions of sustainability.

5. **Accompany change by trust in teachers, academics, and other education personnel and respect for professional autonomy**

The previous points regarded how to support and include teachers, academics, and other education personnel in the green transition in education. It is important to note that the changes should be accompanied by trust and respect for professional autonomy. Once teachers, academics and other education personnel are supported financially and through capacity building to implement EES, they also need to be given time to learn and grow into the topic without other pressures such as standardisation. Including clearer directions for them in the curriculum and training does not mean that they are required to implement it in a specific way. It is therefore crucial to communicate and ensure that teachers have professional independence in this regard in addition to a voice in the political process.

6. **Prepare evidence-based visions and strategies for environmental sustainability in education**

Policymakers can take the leading role in their visions and strategies to include environmental sustainability at the core and by linking to their other ongoing work on the SDGs and encouraging whole-school and whole-school community approaches for implementation. EES strategies should be made at local, national and regional levels and be based on consistent evidence-based reviews of the current situation based on research with all relevant actors in the education sector, including youth, and clear action plans to follow up and monitor. Given that the situation around climate change is expected to worsen in most countries, the review of the situation should research both the gains towards high quality EES and the impact of climate change on education environments, personnel and students directly. This way, the policymakers can foresee potential issues regarding the impact of climate change on the health and well-being of workers, to avoid damage before it occurs and improve the risk management systems of the institutions following the precautionary principle to ensure climate change mitigation and adaptation. Furthermore, one can more closely understand the impact climate change has on working and learning conditions in education institutions, which is of key importance to education trade unions and for achieving high-quality EES. To be efficient, visions and strategies need to be accompanied by sufficient resources and guidance for implementation at educational institutions.
7. Promote professional learning communities for environmental sustainability and monitor their effectiveness

It is key to ensure the exchange of professional experiences among teachers by promoting projects, training, exchange of good practices and communication among teachers from different countries and across sectors, trade unions and actors operating in different policy areas. Strong professional learning communities are necessary for teachers, academicians, and other education personnel to re/upskill to better teach EES and to be better prepared to tackle climate change challenges overall. The study finds that the lack of high-quality learning opportunities is one of the major challenges workers in the education sector face, and solving the situation requires a strong effort from education policymakers to avoid the negative influence of private sector actors taking on this role.

Policymakers can take a bigger role here by ensuring that they promote professional learning communities and that teachers, academicians and other education personnel get the chance and time to attend learning outside the school. Often, the institutions that have succeeded in implementing EES are those that have invested in the professionalisation of their employees and provided the necessary autonomy and trust in the teachers, as well as the space and platforms for staff to engage with the professional learning communities. This could mean incorporating non-formal education initiatives in school or collaborating with organisations and employers more closely in providing non-formal education on the topic and sharing resources and good practices on the employer’s websites. This would also be needed as high quality EES also needs to be focused on local communities perspectives and this approach could strengthen the links between educational institutions and local communities and families in regard to EES. Simultaneously, the government needs to be proactive in leading or regulating the market of online and non-formal learning communities to hinder the fusing of disinformation into learning lessons - one of the issues highlighted by the study.

Lastly, one of the main differences highlighted by our literature review is the demarcation between contexts where there is a strong top-down approach to education policy and policy/state-driven approach versus more bottom-up or horizontal approaches. Thus, the recommendations for national policymakers presented in this section will need to be carefully considered for the three different country contexts (1) the formal public model (top-down); 2) the informal public model (nuanced and horizontal approach), and 3) the decentralised private model (bottom-up) systems. 