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European Expert Network on Economics of Education

Impact of COVID-19 on Education for Sustainable Development (ESD) in the context of twin transition

Executive Summary

Education and Training

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ABOUT EENEE

EENEE is an advisory network of experts working on economics of education and training. The establishment of the network was initiated by the European Commission's Directorate-General for Education and Culture and is funded by the Erasmus+ Programme. PPMI is responsible for the coordination of the EENEE network. More information on EENEE and its deliverables can be found on the network's website www.eenee.eu. For any inquiries, please contact us at: eenee@ppmi.lt.

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Executive summary

Background

The COVID-19 pandemic is a global crisis which has demonstrated how interconnected societies, human systems, and environmental systems are. It is an example of a sustainability challenge of responding to a crisis and preparing for the aftermath of such and future crises. This report focuses on one human system – that of education, and the changes and potential role Education for Sustainable Development (ESD) did or could have made. The report analyses challenges and opportunities created by the pandemic taking into account, where possible, the EU economy twin transition – digital and green, as well as other relevant EU initiatives and policies. Other considerations were global initiatives such as the sustainable development goals (SDGs) and the UNESCO 2020-2030 Strategic Objectives for Education for Sustainable Development (ESD).

Structure and methodology

The report is based on desk-based research, including a literature review and policy documents related to the impacts of COVID-19 on ESD. As COVID-19 is still ongoing, the narrative regarding policy responses and the impact on ESD is also still unfolding. The analysis also examined the transformation required for an 'at-scale' reorientation to ESD in the EU Member States.

Many of the policy responses uncovered did not necessarily target ESD but targeted the provision of education generally at each level. The authors organised their research around the concept of sustainability and ESD for each level (primary and secondary education, VET, higher education). The integration of ESD and impacts on this process by the COVID-19 pandemic were then analysed following the dimensions and aspects of sustainability relevant to each education level. The conclusions and recommendations are based on the identified trends and recognised needs for policy consideration.

Definitions used

Education for Sustainable Development (ESD):

ESD empowers learners to make informed decisions and responsible actions for environmental integrity, economic viability and a just society for present and future generations while respecting cultural diversity. It is about lifelong learning and is an integral part of quality education. ESD is holistic and transformational education, which addresses learning content and outcomes, pedagogy and the learning environment. (UNESCO)

Competences

Competences in sustainability: *'the interlinked set of knowledge, skills, attitudes, and values that enable effective, embodied action in the world with respect to real-world sustainability problems, challenges, and opportunities, according to the context.'* (Bianchi, G. (2020), *Sustainability competences*, EUR 30555 EN, Publications Office of the European Union, Luxembourg)

The impact of COVID-19 on ESD in schools

Embedding ESD in schools requires transformative pedagogies shifting from the didactic approach to teaching to the co-creation of knowledge with teachers and students learning together. It could and should also lead to engaging other partners (e.g. business, media, parents) in co-creation of knowledge and shared learning rather than as experts brought in. In addition, delivery of ESD requires a whole-school approach, focusing not only on the content ('what') but also the 'how' and 'why' we are educating. It calls for reconsidering the purpose of schooling, the content of education (curriculum) and exams, the learning environment, and the pedagogies used. The overall objective of education would need to shift to the development of ESD competences rather than success in exams.

Studies show that before COVID-19, national and institutional policies and approaches to adoption and practice of ESD had varied hugely across EU Member States. At the time of writing, analysis of the longer-term impact of COVID-19 on schools and students in terms of ESD was limited in academic literature, mainly to predictions of the impact. However, it is clear that the pandemic which affected approximately 825 million learners (by school closures in response to the pandemic), has also affected the delivery and promotion of ESD.

In the context of ESD, COVID-19 had at least a threefold impact on the **curricula**. Due to the move to online / blended learning, the critical thinking and analysis of sustainability-related information required teachers to have solid ICT skills to engage students in debate, challenge thinking, and encourage group work. Though some teachers use such skills in the classroom, the evidence shows that this was a new skill set to learn for many. Secondly, due to the lack of face-to-face contact, the typical experiential ESD activities schools normally undertake (active projects, eco-days, eco-clubs) were not possible. Finally, with external exams and monitoring of schools being postponed or cancelled there was a need to re-evaluate how to monitor student progress and success. This lays the ground open to guidance, if not policies, on embedding sustainability competencies in school systems, and Member States could follow the lead of countries that have already done the groundwork.

Effective development of sustainability competences, which is the goal of ESD, requires **pedagogies** that are problem or enquiry-based. These were challenged at the start of the COVID-19 pandemic, as many schools and teachers did not have any experience of online learning and had to develop new pedagogical approaches via digital platforms. It sometimes led, however, to positive developments, when teachers moved from a lecturing approach to embracing interactive, participatory approaches.

COVID-19 led to many changes in access to traditional **learning environments**. The use of outdoor spaces and visits to 'green' spaces, which had always been an important component of ESD, were encouraged. Building experiences of students and teachers of moving the learning from the classroom to other environments can be considered a promising approach to be continued after the pandemic.

Coping with the new education realities inflicted by the pandemic required substantial accommodation by teachers. It showed that **teachers** lack **training** in risk and resilience building, outdoor use, flexible timetabling, use of IT, measuring learning outcomes in different ways to exams, partnering with communities and businesses, inclusivity and well-being of students when they learn remotely.

The examples of repatterning of relationships as a response to COVID-19 restrictions, shows that it would be also possible to repattern relationships towards embedding ESD in school practice and curriculum, including working with businesses and communities. The adoption of blended learning also shows the ability of the systems and teachers to adapt and focus more on the role of 'facilitator' rather than the deliverer of content, which is necessary for effective ESD, too. Finally, there could be a positive potential impact on the

uptake of ESD in the EU if schools continue engaging parents in learning for sustainability with their children.

The impact of COVID-19 on ESD in vocational education and training

The pandemic has highlighted problems that existed in vocational education and training before, such as the digital divide by gender, age, birth origin (migrant students and workers), employment status, social status, and location (urban and rural areas). Additionally, there are also potential risks for other key dimensions of VET, particularly in facilitating transitions to and within the world of work, as well as enabling the capacity-building for sustainable development. The weak progress in sustainable development curriculum design stands out, where competences for sustainability are far from being systematically integrated into vocational teaching-learning processes. Those impacts of a pandemic may be seen as threats to implementing ESD in VET in a short-, medium- and long term.

During the pandemic, the main focus of VET systems was to ensure that both the school-based and company-based initial vocational education and training (IVET) models continued to function, so that young people could still gain the education necessary for their personal development. Countries adopted a variety of measures to facilitate online access (students, families, VET schools and training firms), spanning enhanced connectivity, IT infrastructure, devices, digital learning platforms, etc.

As for employee training, there appears to have been little systematic effort to support further employers in using lockdowns to train their staff. In those cases, with public support, continuing training was usually related to online training that was already available before the outbreak of COVID-19. Although there are certain differences between European countries, the window of opportunity to strengthen training in firms and training for the unemployed has been underexploited.

The response to COVID-19, both from governments and from the VET system itself has been fundamentally aimed at ensuring access to and provision of VET, mainly through online distance learning environments. The practical absence of preparation in the VET field — both in Europe and worldwide — for a crisis of such magnitude has become evident, revealing a threefold problem:

- insufficient pedagogical adaptation of experiential learning processes to online distance learning environments (online learning by doing);
- the difficulty of ensuring the continuance of face-to-face work-based learning options (apprenticeships and internships);
- limited socialisation of learners – students' opportunities diminished in terms of the experience acquired in the workplace, the relational capital gained, and the personal maturity achieved.

VET systems need to ensure that all learners acquire the competences needed to promote sustainable development, as well as provide youth and adults with the relevant information and awareness of it. Also, it requires stronger integration of other key functions of VET, such as the promotion of (green/sustainable) technology transfer and locally applied innovation. Before COVID-19, the promotion of ESD in VET was generally minimal at both the European level and in the Member States. During the pandemic, it appears that digitalisation at the organisational level has been advancing more rapidly than embedding sustainability. In this regard, governments have greater room for manoeuvre in providing a comprehensive framework for strategies, action, monitoring, and assessment of VET for sustainable development.

However, it is also necessary to point out that the pandemic has had effects that may help to make the most of this global crisis in terms of promoting sustainability. Firstly, the

pandemic has reinforced public discourse on the relevance of VET to address the present and future of Europe in terms of sustainable competitiveness, social equity and resilience. Secondly, the various initiatives that allowed to continue accessing VET during the pandemic show a strong institutional and educational framework in Europe, which highlights our strengths and assets to move forward with the new curricula, competences and methodologies towards sustainability. Finally, in the Berlin Declaration, the roadmap for ESD is reinforced as a result of the pandemic, which allows the European Union to give a new political impetus to VET for sustainable development.

The impact of COVID-19 on ESD in higher education

In higher education (HE), approximately 220 million students globally have been affected due to the disruption caused by COVID-19. Studies recognise major influences of the pandemic on the core aspects of higher education: education, research, institutional framework, and community outreach.

In the dimension of **education**, the urgent shift to online learning and teaching in HEIs led to a situation where the focus was put on teachers' digital skills and use of platforms, rather than on competences in teaching and integrating ESD in HE. In addition, online learning led to lack of engagement and activity of students, as well as limited opportunities to connect with real-life experience, not to mention the increased stress and social isolation and inequality of students and teachers, in terms of internet access.

In terms of **research** – another core function of HEIs – the dominant orientation toward health-related issues lead to lack of research on other important issues related to sustainable development. The disruption of projects or restrictions on fieldwork caused by COVID-19, inflicted risks for obtaining the data and disturbed the dynamic of research. Many conferences were cancelled or postponed, which reduced communication and exchange of knowledge between researchers.

The developments of the pandemic affected the **institutional framework** of HEIs. The frequent changes and uncertainty led to difficulties in long term-planing of sustainable governance, and the lost income from tuition or public funds challenged the financial sustainability of HEIs. As the whole-institution approach is key for the holistic delivery of ESD, the closure of institutions and campuses disrupted the delivery of usual services and 'greening practices'.

Finally, the pandemic caused barriers for **community outreach**, as emergency needs in healthcare and economic challenges inflicted risks of economic crisis and social isolation, followed by unequal access of people to education, technology and employment. The pandemic also heightened the issues of equity and inclusiveness, delivery of lifelong learning, and the quality of results in HE. Threats to equity, inclusiveness, lifelong learning and quality of education can compromise progress toward implementation of SDGs and thus the success in integrating ESD in HE.

Besides its negative effects, the pandemic also has transformative potential for education. Creative use of information and communication technologies (ICTs) in sustainable leadership, providing transparency of decision-making processes, policy measures and changes can contribute to a more enabling environment for the development of a 'culture' of sustainability, increasing the chances for quality integration of ESD in all HEI segments.

The impact of the COVID-19 pandemic opens the space for re-designing curricula and strategies in teaching sustainability at HEIs. Changes caused by the pandemic in environmental, social and economic aspects of life and developments have provided an opportunity to critically reflect on previous perspectives, searching for constructive solutions and scenarios for the future.

COVID-19 impacts strengthen the need for collaboration and sharing experiences between teachers and researchers in teaching for sustainability. Online conferences and workshops on sustainability issues significantly contributed to bridging the gap between that need and opportunities to meet 'face to face' due to many restrictions applied. It also improved access to professional development and learning programmes for teachers, researchers and students from HEIs in the ESD field.

Despite many common challenges, the response of HEIs around the world to the changes brought by the COVID-19 pandemic varied but is generally estimated as quick and efficient, assuring continuation of studies. Lessons learnt and the reflection on experiences should be used at the institutional as well as the systems' level in order to improve resilience for coping with future challenges as an important segment of competences for sustainability.

Reflections and recommendations: impact of COVID-19 on ESD as the window of opportunity to transform education and society

COVID-19 has caused a global health and sustainability crisis. One of the greatest disruptions has occurred in the education sphere, meaning that all different educational levels (primary and secondary schools, VET schools and HEIs) have been affected across all their functions. Based on the analysis of trends and threats to the institutional, normative, socio-economic and territorial frameworks articulated around each level of education, challenges and barriers may also be seen as opportunities to contribute to the transformation of education and its supporting systems. The key recognised recommendations facing ESD are structured according to the five UNESCO 2020-2030 Roadmap priority areas: advancing policy; transforming learning environments; building capacities of educators; empowering and mobilising youth; accelerating local level actions.

Moreover, each priority area is articulated from a systems-thinking approach:

a) A system paradigm shift;

b) A change in whole-system goals;

c) A repatterning of relationships, cultivating systemic ways of organising towards ESD;

d) A reconfiguration of structures and flows within the education system.

1. Advancing ESD policy for ESD

Future policy preparedness for education sustainability

a) A system paradigm shift

- Rethinking education ecosystems in terms of sustainable development beyond digitalisation, bringing the educational offering into line with the prevailing social demand for sustainability.

b) A change in whole-system goals

- Providing appropriate strategy and governance is a *sine qua non* for efficient and effective ESD, as it enables the design and development of an ESD policy framework and regulations. Governance of ESD must involve representatives from all areas within the educational ecosystems (primary and secondary education, VET and HE).
- Integrating and prioritising ESD policies at the national, regional and local level, applying holistic and cross-sector policy approaches.
- Developing an integrated ESD information system or other SD reporting, surveillance and enforcement mechanisms which, under a harmonised and flexible approach, make it possible to monitor and evaluate countries' and regions' progress towards ESD, which in turn requires comprehensive, reliable data on ESD.

- Developing public means of acknowledging educational stakeholders' contribution to SD, thereby reinforcing public perceptions of sustainability.

c) A repatterning of relationships, cultivating systemic ways of organising towards ESD

- Including ESD criteria (cross-sector, transdisciplinary, collaborative, participatory) in the provision of grants and funds for innovation in education.
- Integrating ESD planning into the lifelong learning curriculum (from early childhood education through to active ageing). Dedicating resources to expanding, adapting and innovating education and training offerings to correct the lack of coverage sustainability receives in European education systems.
- Developing public means of acknowledging educational stakeholders' contribution to SD, thereby reinforcing public perceptions of sustainability.

d) Reconfiguration of structures and flows within the education system

- Strengthening resources to support equity and inclusiveness in education for children, young people and adults, including non-formal and informal programmes for communities and stakeholders.
- Fostering research, technology transfer and innovation programmes and schemes for sustainability projects, in particular in senior years at school, VET and HE. Programmes, incentives and investment in research and innovation must be promoted in both blended SD learning for all and work-based learning for sustainable development for young people and adults.
- Developing proximity policies, bringing the focus of analysis of ESD shortfalls at the different educational levels (primary and secondary, VET and HE) down to at least regional level by 2030 (e.g., 'Regional ESD systems' – RES30) and prioritising knowledge and experience of SD in terms of proximity and the needs of the respective education ecosystems.

2. Learning environments for ESD

Promoting a whole-institution approach towards ESD

c) A repatterning of relationships, cultivating systemic ways of organising towards ESD

- Promoting a whole-institution approach to ESD: governance, estates/campus, procurement, curriculum, community/stakeholders, action learning/research.
- Creating mechanisms for ESD coordination in education systems, including the needs and activities related to emergency prevention, preparedness, and response.
- Developing internal means of acknowledging educational stakeholders' contribution to SD, thereby reinforcing schools', VET and HE institutions' perceptions of sustainability.
- Conducting constant monitoring and evaluation so that school/vocational organisation/university operation and the outcomes achieved in terms of sustainability are continuously improved.

d) Reconfiguration of structures and flows within the education system

- Enhancing learning environments to support the development of competences of children, young people and adults, facilitating their human development at a cognitive, affective and behavioural level, in the context of contributing to sustainable development.
- Promoting and supporting collaboration between students and teachers, communities, trainers and academic/non-academic staff in action research and activities addressing sustainability and the impacts of the pandemic (e.g., through collaborative project-based learning).
- Ensuring and allocating funds for financial support to students and staff (technology, tools for teaching and learning, etc.) and ensuring that policies are created to ensure that disadvantaged students have access to online learning.
- Design and develop rigorous quality assurance systems specific to education settings to guide the whole-institution approach.
- Intensifying communication through online and social media channels, assuring transparency of information and opportunities for students and staff to participate in decision-making

processes, including full and clear information on policy regarding the measures against the pandemic.

- Developing clusters of schools with active and dynamic management teams to act as learning hubs by building networks around them, to move to scale and move beyond merely ad hoc activities.
- Embedding ESD in schools, VET schools and universities and other educational and training organisations means developing or updating ESD and sustainability strategies at the institutional level, incorporating the lessons learnt during the pandemic.

3. Teachers and educators for ESD

Providing SD capacity development in:

b) A change in whole-system goals

- Authorities must multiply their plans and programmes to meet the needs detected among teaching staff (and among non-teaching staff) in terms of sustainability experience: knowledge and understanding of SD, sustainability competences and skills and use of learning methodologies for ESD.
- Fostering sustainability knowledge and competences, using the framework developed by UNESCO (for instance, anticipatory competency, normative competency, strategic competency, collaboration competency, critical thinking competency, self-awareness competency and integrated problem-solving competency), or the future European key competence framework on sustainability.
- Relevant competences for a sustainable production system (efficient technologies, clean technologies, Artificial Intelligence, etc.)
- Innovative and sustainable blended experiential formats and work-based learning (apprentices, trainees, etc. for SD).
- Providing incentives for organising and participating in local and global gatherings, webinars and conferences dealing with issues of sustainability teaching and integration of issues related to the impacts of the pandemic into curricula.
- A stable ESD training framework for teachers, with clear priorities and supported by incentives and traceable ESD and SD specialisation in the short, medium and long term.

c) A repatterning of relationships, cultivating systemic ways of organising towards ESD

- Integrating sustainability and ESD into the pre-service education of teachers at all the education levels and encouraging subsequent lifelong learning and training throughout their careers.
- Supporting knowledge sharing and improving online teaching strategies based on a participatory and transformative approach.
- Maximising the synergies, support and incentives needed to advance applied research into sustainability-oriented education.

d) Reconfiguration of structures and flows within the education system

- Having a sustainability information system for teachers to ensure effective vocational guidance and to adapt the education and training offering.
- Creating new prescriptive roles, such as that of sustainability adviser for educators, and boosting actions and experiences that promote sustainability culture among teaching staff.

4. Youth and ESD

Providing opportunities for youth engagement

a) A system paradigm shift

- Supporting initiatives involving joint projects and activities between students and staff of schools, VET schools and universities, addressing the sustainability of institutions or communities or the quality of education.

c) A repatterning of relationships, cultivating systemic ways of organising towards ESD

- Involving students in decision-making on all important issues related to the impacts of the pandemic, policy or structural changes, and sustainable development.
- Supporting students' networks and associations in providing help or assistance to international students, those hit by the impacts of COVID-19 or those who are disabled or marginalised.

d) Reconfiguration of structures and flows within education

- Better support for students in identifying and encouraging their interest in SD and the development of personalised learning pathways as part of lifelong vocational guidance.
- Encouraging socialisation of students in both the world of education and the world of work in a changing world, focusing on a sustainable and just future for all.

5. Community and ESD

Empowering local communities as 'nodal' platforms for all priority action areas

c) A repatterning of relationships, cultivating systemic ways of organising towards ESD

- Initiating activities to meet emerging needs of communities during and after the pandemic, providing professional and voluntary support from staff and students at primary and secondary schools, VET schools and universities, promoting solidarity and collaboration.
- Establishing and strengthening partnerships with local stakeholders contributing to practical inputs to teaching and learning for sustainability.
- Fostering knowledge, research and innovation both within the educational ecosystems (primary and secondary education, VET and HE) and towards local communities, firms and institutions to foster sustainability and ESD.

d) Reconfiguration of structures and flows within education

- Involving community members in action research and capacity development programmes addressing local and global sustainability issues and global trends.

Looking across all three education sectors (schooling, VET and higher education), the pandemic has focused more attention on the purpose of education to be about thriving in a changing world and not just on jobs and careers. It has also fast-tracked the use of remote learning and IT in the education sector, sometimes without much training available. It has questioned how and where educational institutions can operate.

In a moment of change, as the pandemic has been, many other aspects of society will also be questioned and re-examined. They include the climate crisis and other sustainability issues which have been highlighted or heightened during the pandemic.

Integration of sustainability through ESD into the system – from policy through institutional transformation, human resources and community development – contributes to the systemic changes, necessary to meet complex demands of today and tomorrow. The synergy of 'top-down' and 'bottom-up' actions and processes is needed at all the levels of education and aspects of life in all the regions around the world. Massive changes caused by the pandemic create opportunities to learn from it and to contribute to the resilience of citizens and systems in order to cope with possible new disasters sustainably. Implementation of ESD in all levels of education can significantly support that process.

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