



Enabling whole-school approaches to integrate Education for Sustainable Development

RECOMMENDATIONS FOR ENHANCED INTEGRATION OF EDUCATION FOR SUSTAINABLE DEVELOPMENT INTO CURRICULUMS AND SCHOOLS FOR IMPROVED EDUCATIONAL QUALITY AND RELEVANCE

Sustainable Development demands fundamental, transformative changes in our society, with education playing a crucial role in building capacities for this process. The international understanding of Education for Sustainable Development (ESD) has grown significantly over the past thirty years since its initial framing as an outcome of the Rio Earth Summit in 1992 as stated in chapter 36 of Agenda 21 (UNGA, 1992). Led by the United Nations Educational, Scientific and Cultural Organisation (UNESCO), during the UN Decade of ESD from 2005 to 2014 an understanding of ESD as a whole-school form of education became integral to the overall quality of education and understood as a process of life-long learning (UNESCO, 2014).

"ESD has to place emphasis on how each learner undertakes transformative actions for sustainability, including the importance of opportunities to expose learners to reality, and how they influence societal transformation towards a sustainable future. ESD in action is citizenship in action." (UNESCO, 2020: 18).

Framed within this context, the assumption here is that education assumes a pivotal role in shaping minds toward pro-sustainability knowledge, attitudes, and behaviours with a view to the adoption of sustainable mindsets and actions.

HOLISTIC APPROACH TO ESD

The idea of a holistic approach to ESD has been promoted since the beginning of the UN Decade of ESD in 2005, and since then many effective approaches have been applied and tested. These approaches include *all-day schooling, whole-school approaches, integrated, decentralised and localised curriculums, interdisciplinary and transdisciplinary pedagogies, values-based and service-based learning*, etc. The benefits of these holistic approaches towards ESD on the overall quality and relevance of educational practice are also well documented (Laurie et al., 2016).

This policy brief argues that adopting a **holistic approach to ESD** affords school providers the opportunity to improve students' learning outcomes and thus enable transformative changes in our society. Although many good practices and case studies demonstrate how ESD can be implemented in a holistic manner, a major challenge is noted in the fact that this is not commonly integrated or mainstreamed within education systems or most schools' practices. By examining a selection of case schools across four European countries (Austria, Germany, Norway and Portugal), it has been possible to identify several persistent barriers that hinder the integration of ESD, thus limiting the overall effectiveness of the piecemeal approaches to ESD that have often been implemented, and impeding the achievement of the type of transformative learning called for in the international frameworks on ESD (UNESCO, 2020).

PERSISTENT BARRIERS INCLUDE

- ▲ Lack of cohesive educational policy that integrates ESD as both a means to support the achievement of the 2030 Agenda for Sustainable Development (UNGA, 2015) and to enhance the overall quality and relevance of educational performance.
- ▲ Limited integration of sustainability-based learning outcomes – especially concerning learners' overall competence development – within curricula that support scaffolded approaches for ESD integration into grade-to-grade progression.
- ▲ Continued focus on the inclusion of ESD as topic-related knowledge within traditional subjects and disciplines, as well as a lack of applied and real-world engaged learning.
- ▲ Inadequate pedagogical strategies to support the holistic and comprehensive development of sustainability competencies as target learning outcomes.
- ▲ Lack of continuing professional development for teaching staff to create strong awareness of ESD approaches, strategies, and pedagogies, as well as the possibilities for integrated and interdisciplinary teaching within their schools.
- ▲ Pronounced focus on the management of schools for efficiency over quality which often limits the opportunities to develop communities of practice among school staff towards enhancing collective practice.
- ▲ Limited engagement at the school level to define a common mission and value basis for their work on ESD.

WHY INTEGRATE A HOLISTIC APPROACH TO EDUCATION FOR SUSTAINABLE DEVELOPMENT?

ESD encompasses pedagogical approaches and learning methodologies that actively engage learners in defining a sustainable future. It integrates progressive learning methods and theories aimed at enhancing the quality and relevance of educational

practices, fostering transformative learning and life-long learning competencies so that learners are enabled to play an active role in creating positive change in their schools and their societies.

ESD addresses critical socio-ecological challenges, including climate change, biodiversity loss, elimination of poverty, hunger and social inequality. It also redefines prosperity, well-being and quality of life through sustainable development principles and values. ESD promotes:

- ▲ Whole Systems Perspectives and Systems Thinking: To foster holistic understanding and interpretation.
- ▲ Interconnected Focus: To appreciate the interdependence within systems and the relationships between different actors and actions.
- ▲ Cooperation over Competition: Where learners collaborate to examine challenges, develop new knowledge and create new solutions.
- ▲ Critical Praxis: Learning cycles between action and reflection, developing a deeper awareness and enhancing learning relevance.

A **holistic approach to ESD** provides:

1) an effective way to *integrate sustainability learning* as a key feature of a school, across and between different subjects, and through a diversity of learning experiences, and

2) an important opportunity for *enriching students' learning outcomes* by providing rich experiences for *active, collaborative and engaged learning* that enhances real-world relevance and the practical application of learning in meaningful and authentic

ways. These are essential features for facilitating learners abilities to envision, plan and create sustainable futures for themselves and their communities.

The **SustainALL project's guidelines on a holistic approach to ESD** are structured around interlinking work at three different levels, which will be explored further in the following sections of this brief. The SustainALL project aims to improve sustainability at all levels in schools based on an evidence-informed, theory-practice dialogue.

3



TEACHER LEVEL

- ▲ Teacher as facilitator
- ▲ Planning interdisciplinary collaboration
- ▲ Sustainability competence as learning objective



SCHOOL LEVEL

- ▲ Values of practice
- ▲ Whole-school approach
- ▲ All-day school



STUDENT LEVEL

- ▲ Collaborative and active learning
- ▲ Real-world engagement
- ▲ Students as change agents

The School Level

A WHOLE-SCHOOL APPROACH WITH A FOCUS ON MIND-SET AND VALUES



This section highlights the benefits of a **whole-school approach** to creating an effective learning environment for ESD. Three main aspects are included:

- Mindset and Value Base: Having a whole-school mindset and values that shape its vision and mission for sustainable development.
- Whole-School Approach: Mainstreaming sustainability into all aspects of school life.
- All-Day School and ESD: Leveraging the advantages and addressing the barriers of all-day schooling to implement a whole-school approach to sustainability.

4

BUILDING A SUSTAINABILITY MINDSET AND VALUE BASE

Vision and Mission Alignment: A school's vision outlines its core purpose, values and objectives, while the mission explains the actions taken to achieve this vision. Both should align with ESD principles and values.

Participatory Development: Involve the entire school community, including students, in developing a shared vision and mission related to ESD. Communicate these internally and externally, practice them in teaching, and integrate them into actions with students, parents and the wider community.

APPLYING A WHOLE-SCHOOL APPROACH

According to UNESCO (2014), a whole-school approach integrates sustainability into all aspects of the educational institution, including curriculum,

campus operations, organisational culture, student participation, leadership, management, community relationships, and research.

FOR EXAMPLE

- Including sustainability topics in lessons and school projects, focusing on themes relevant to the students' local environments.
- Establishing a sustainability declaration for the school.
- Creating democratic decision-making structures, such as junior parliaments or regular council meetings between student representatives and school leadership.

All-Day Schooling: One model for adopting a whole-school approach is the all-day school. This involves extended time at school beyond regular class hours, aimed at improving educational outcomes. This approach is more common in primary schools but varies significantly across and within countries, and even between individual schools.

Considerations: The relationship between extended school hours and academic results is complex and influenced by intrinsic and contextual factors. Effective implementation involves gradual introduction and professional guidance for staff, along with financial support.



KEY MESSAGE

Schools can have a shared vision for sustainability that is integrated into all aspects of school life.

The Student Level

ACTIVE AND COLLABORATIVE LEARNING, REAL-WORLD ENGAGEMENT AND TRANSFORMATION OF LEARNING INTO ACTION



This section highlights the ways in which a **holistic approach to ESD** can be promoted by school communities. Three main aspects are included:

- Active and Collaborative Learning: Facilitating and enabling active and collaborative learning approaches to promote students' engagement.
- Real-World Engagement: Approaching interdisciplinary learning through real-world engagement.
- Transformative Learning and Students as Change Agents: Supporting students to become change agents in a rapidly changing world.
- Involve Students in Decision-Making: Engage students in decisions on specific problems for educational experience and value.
- Reflect on Actions: Encourage students to participate in actions and reflect on their outcomes.
- Develop Participation Skills: Support students in developing skills like listening, considering different viewpoints, and showing empathy.

ACTIVE AND COLLABORATIVE LEARNING

Through the involvement of students in their learning processes, students can learn through experiences rather than rote memorisation. For example, investigative activities that explore the 'why' behind the 'what'.

Through the facilitation of learning by supporting students in every step of their learning journey and by helping students to see mistakes as opportunities for learning.

PRACTICES TO SUPPORT STUDENTS AS CHANGE AGENTS

Transformative learning is essential in developing students as change agents who can tackle sustainability challenges. This approach involves critical reflection, challenging existing beliefs, and fostering new ways of thinking and acting.

FOR EXAMPLE

- Peer-Led Team Learning (PLTL): Students work through problems collaboratively, taking turns explaining concepts.
- Flipped Classroom: Students engage with pre-recorded lectures outside of class and focus on problem solving and discussion during class.
- Think-Pair-Share: Encourages individual reflection, peer discussion, and group sharing.
- Peer Instruction: Students answer concept questions and discuss their reasoning to deepen understanding before re-voting on the questions.
- Interactive Demonstrations: Students predict and discuss the outcomes of demonstrations.
- Concept Mapping: Groups create visual diagrams capturing key relationships and processes.

The Teacher Level

THE TEACHER AS FACILITATOR, INTERDISCIPLINARITY, AND SUSTAINABLE COMPETENCIES



This section highlights the ways in which a **holistic approach to ESD** can be promoted by teachers. Three main aspects are included:

- ▲ Teacher as Facilitator and Enabler: A shift from traditional teaching to facilitating and enabling learning.
- ▲ Interdisciplinarity in Teaching: A shift from teaching in discrete disciplines towards an interdisciplinary approach.
- 6 ▲ Sustainability Competence as Learning Objective: Enabling the development of knowledge, skills and attitudes for sustainability and the importance of the teacher in fostering student learning.

KEY ASPECTS OF TEACHER AS FACILITATOR

- ▲ Awareness and Eco-centrism: Understanding and addressing eco-centric perspectives.
- ▲ Collaboration with Extracurricular Partners: Engaging with external partners for enriched learning experiences.
- ▲ Dealing with Uncertainties: Providing opportunities for students to develop solutions to sustainability challenges.
- ▲ Democratic Practices: Involving students in topic choices and teaching impacts.
- ▲ Equal Communication: Engaging with students on an equal level.

INTERDISCIPLINARITY IN TEACHING

Interdisciplinarity: Different discrete disciplines, such as Mathematics, Geography and French work together in an integrated way to explore a theme. To appreciate the interdependence within systems and the relationships between different actors and actions, teachers must enable students to approach problems in an interdisciplinary way that facilitates systems thinking. Such theme-based learning also enriches the curriculum and enables learning to be more relevant and transformative.

KEY COMPETENCIES IN SUSTAINABILITY

We recommend that teachers promote the following competencies as specific learning outcomes to enable students to understand and act to address complex sustainability problems.

Systems Thinking: Describing sustainability as a holistic concept that includes environmental, economic, social, and cultural dimensions. Using life cycle thinking to analyse the risks and benefits of human actions.

Critical Thinking: Assessing information and arguments critically to identify sustainability challenges and opportunities.

Problem Framing: Identifying and framing sustainability challenges effectively to develop potential solutions.



EXAMPLE OF COMPLEXITY IN SUSTAINABILITY

Consider the choice between buying a cucumber wrapped in plastic or one that is unwrapped. This decision involves multiple factors:

Seasonal Impact: Cultivating cucumbers in winter requires more energy compared to seasonal cultivation.

Life Cycle Assessment: Balancing the CO₂ footprint of plastic packaging against food waste. For instance, plastic packaging can reduce food waste

by half, potentially resulting in a lower overall CO₂ impact despite the negative aspects of plastic waste.

This example illustrates the need for systems thinking in sustainability decisions, considering time, space, and context to understand interactions within and between systems. It also highlights the necessity of recognising the root causes of unsustainable practices and the interplay between natural events and human actions.

KEY POLICY MESSAGES

ENABLING RELEVANT, QUALITY EDUCATION THROUGH HOLISTIC APPROACHES TO ESD

7

FOR POLICY MAKERS

- 🟡 Recognise the importance of education in supporting the achievement of the 2030 Agenda for Sustainable Development within national mandates for education.
- 🟡 Define the actionable outcomes of education to support learners' abilities to pursue and enact sustainable futures for all.
- 🟡 Promote the importance of sustainable development to be pursued as a cross-cutting, interdisciplinary theme through the provision of holistic approaches to ESD that ensure relevant, engaging and applied real-world learning.

FOR CURRICULUM DEVELOPERS

- 🟡 Elaborate learning outcomes for the progressive development of sustainability competencies.
- 🟡 Demonstrate integrated and scaffolded paths to work with sustainability topics, themes, and outcomes across grades and in collaboration between subjects.
- 🟡 Identify approaches that work with the cognitive, socio-emotional, and behavioural learning domains of ESD.

FOR EDUCATIONAL AUTHORITIES

- 🟡 Mandate schools to develop whole-school approaches that are mission-driven and value-based.
- 🟡 Support leadership processes for all staff to be involved in school development efforts and as a professional learning community.
- 🟡 Provide schools with resources to create flexible and dynamic learning environments and to engage with real-world learning and action projects.

FOR TEACHER EDUCATION

- 🟡 Ensure that student teachers receive training both in subject-based and interdisciplinary didactics.
- 🟡 Develop an appreciation of the complex link between education and competency development as a progressive and life-long endeavour.
- 🟡 Foster an understanding of teaching as a collective and collaborative profession that is dependent on active teamwork and mutual support.

sustain LL PROJECT

The SustainALL project is an Erasmus+ project with partners from Austria, Germany, Norway, and Portugal. SustainALL engaged schools recognised for their progressive integration of sustainable development principles and transformative learning, whether through a whole-school approach or an all-day school model. Insights from school leaders, teachers and students highlighted their efforts and challenges in promoting sustainable development.

The SustainALL team developed a framework to help school leaders, teachers and students integrate ESD into their institutions. An iMooX course was created to provide further capacity building and support in identifying, establishing, and enhancing good ESD prac-

tices in schools. The course comprises 11 modules across three main focus areas: school level, teacher level, and student level.

Each module includes good practice videos from the four SustainALL project countries, informative explanatory videos, links to teaching resources, and reflection and challenge tasks. This guidebook mirrors the structure of the iMooX course and can be used both as a stand-alone tool and in compliment with the course.



More information about SustainALL can be found at: <https://sustainall.eu/en/>

REFERENCES

- △ Laurie, R., Nonoyama-Tarumi, Y., McKeown, R., & Hopkins, C. A. (2016). Contributions of Education for Sustainable Development (ESD) to Quality Education: A Synthesis of Research. *Journal of Education for Sustainable Development*, 10(2), 1–17.
- △ UNESCO. (2014). *Shaping the Future We Want: UN Decade of Education for Sustainable Development (2005-2014) - Final Report*. UNESCO.
- △ UNESCO. (2020). *Education for Sustainable Development - A Roadmap*. UNESCO.
- △ United Nations General Assembly. (1992). *Agenda 21: The United Nations programme of action from Rio*. United Nations Commission on Environment and Development.
- △ United Nations General Assembly. (2015). *Resolution A/RES/70/1: Transforming our world: the 2030 Agenda for Sustainable Development*. United Nations.

PARTNERS



PRIVATE
PÄDAGOGISCHE
HOCHSCHULE
AUGUSTINUM



Pädagogische Hochschule
Ludwigsburg
University of Education



Inland Norway
University of
Applied Sciences



IUS | Institut für Unterrichts- und
Schulentwicklung



Co-funded by
the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or OeAD-GmbH. Neither the European Union nor the granting authority can be held responsible for them.