



European Education Area Strategic Framework

Working Group on Schools: Learning for Sustainability

Sustainable infrastructure and learning environments in schools: key messages



EUROPEAN COMMISSION

Directorate-General for Education, Youth, Sport and Culture
Directorate B – Youth, Education and Erasmus+
Unit B.2 – Schools and Multilingualism

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Key Messages

Manuscript completed in [Month] [Year]

[Revised/Corrected/nth] edition

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Print	ISBN [number]	ISSN [number]	doi:[number]	[Catalogue number]
PDF	ISBN [number]	ISSN [number]	doi:[number]	[Catalogue number]
EPUB	ISBN [number]	ISSN [number]	doi:[number]	[Catalogue number]
HTML	ISBN [number]	ISSN [number]	doi:[number]	[Catalogue number]

Luxembourg: Publications Office of the European Union, 2023

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Introduction

Members of the EU Working Group Schools: Learning for Sustainability held a meeting on sustainable infrastructure and learning environments in schools on 14-16 June 2023. The meeting, which took place in Madrid, was hosted by the Spanish Ministry of Education and Vocational Training. Numerous presentations on creating sustainable learning environments reflected a diverse set of experiences from across Spain and Europe. These presentations and a site visit to an early years education provider served to inform the dialogue at this meeting.

The policy messages outlined below are drawn from discussions at the meeting and are organised under headings that relate to the main themes identified by group members.

Changing needs

Societal developments, climate change and 21st century learning needs require us to rethink how school spaces and places are developed and used. The school community must adapt and respond to these changing needs by re-thinking and re-purposing existing buildings, spaces and infrastructure so that they are more suitable and relevant to the educational expectations of today.

Breaking down walls and dark spaces

School spaces and places need to give learners the freedom to explore nature and deepen our relationship with each other. These are important considerations in learning for sustainability. The latter requires breaking down walls, merging the natural environment with the classroom setting as well as creating flexible learning spaces (indoors and outdoors) that enable learner interaction. Flexible spaces are also inclusive as they can support students' diverse needs.

Cooperation between schools and designers

Architects and design professionals are working closely with schools converting existing indoor and outdoor spaces into inspiring places using natural materials, resources and light to attain this. Dr Fermín Blanco, architect and founder of the Lupo Platform, showcases how ethics and aesthetics can be combined to attain sustainable learning environments in schools and universities. Architect Mamen Artero Borrueal presented the Patios x el Clima Project and explained how architects and designers are working with schools and local communities to rethink existing (primarily concrete) playgrounds and open these new green spaces up for use by the local community.

Creating a pedagogy of hope

Climate change scenarios can be very disempowering and lead to eco-anxiety in young learners. It is important that school spaces promote health and well-being but also hope and inspire alternative and positive futures through education. In Ceuta, the First Sustainable Development Fair saw school pupils celebrating and sharing visions for an alternative future. Through a Picasso exhibition, video conferences and roundtables, the Fair served to inspire commitment to sustainable environments and showcased the changes that had taken place in schools. Policy measures should support schools looking to embody what an alternative future could look like and encourage learners to aspire to alternative pathways.

Inspirational learning spaces

Examples exist of school learning environments that invite pupils and students to connect with the beauty of nature as well as celebrate the magic of learning in the outdoors. The Escuela Infantil Sabina in Madrid, visited by the group, showed how the natural environment can be brought indoors through the use of natural resources and how the outdoor classroom serves as a core learning space helping to deliver developmental and learning milestones. This design has strengthened the pre-school's connection with the biodiverse environment and reminds the children in their care of our intrinsic links with nature.

Risk versus freedom

Connecting learners with their physical environment and encouraging greater interaction with nature can also bring some risks. However, not all exposure to risk leads to harm as it offers opportunities for learning about safety and well-being and the need to understand how to respond in risky scenarios. In France, risk education is a cross-cutting issue in all schools as pupils are supported from a young age to learn to assess and manage risk in the environment.

Data and technologies

In Ireland, European funding was used to develop a number of pilot projects to help collect data and good practice examples to help leverage national funding for the adaptation of school spaces and buildings. Those participating in the pilot project were supported by both the Department (ministry) of Education and the Department of the Environment. The schools tested the new energy-efficient and non-carbon technologies and modelled to households and other community members how these technologies work in practice, encouraging further investments in sustainable technologies across the community.

Funding and upfront investment

The transformation of school spaces requires more than just seed funding, but the gains can be social, emotional, cognitive as well as financial. Sustainable spaces and buildings

conserve energy and generate savings and are also known to be more durable. In Cyprus, the PEDIA programme has seen investments in school buildings to improve natural lighting, cooling and ventilation and energy efficiency with the assistance of EU funding. These changes reduce energy bills but are also having a positive impact on learning outcomes as students benefit from the improved thermal comfort conditions and become more engaged in learning about the lived experience in schools.

Mainstreaming efforts

The New European Bauhaus (NEB) initiative offers great opportunities to upscale efforts across EU Member States in this area. In Greece, The ECO2-Schools Project has shown how schools can be adapted to meet climate goals as well as promote pedagogical change in support of climate education. It has shone a light on the development and delivery of pathways for schools to become climate positive and shown how schools can become hubs of innovation for the green transition in the community.

Schools can be resilient and self-sufficient

Educational places should model the changes that need to be seen in our communities as we advance the commitment towards the green transition. Schools can aspire to be resilient and self-sufficient with the help of community stakeholders who are in a position to support the school with this ambition. The Lupo Foundation in Spain works with school communities through identifying materials and resources left over from local industries and repurposes them to create school playgrounds and other spaces for learning. They have developed a certification system to ensure that these materials are safe and appropriate for use in educational establishments.

Multi-disciplinary support

In Belgium, BLES, an umbrella organisation working on the greening of playgrounds, has shown that architects, designers, teachers and students together with specialists from the University of Gent have come together to bring about a school plan that meets diverse learning needs. BLES also supports schools to apply for grants and provides pedagogical training to make the best use of the new playgrounds.

Open communities

Sustainable learning environments should also consider how schools become open communities in other ways and to include people displaced by climate and through migration. This brings the social justice agenda into the physical concerns associated with sustainable learning environments and requires further planning and consideration.

Global issues and policy priorities

The Covid pandemic offered the possibility to build back better and rethink space and place in educational environments. Similarly, recent events associated with Russia's invasion of Ukraine and issues related to access of energy resources have brought urgency to this agenda and encouraging schools to invest in solar panels and other means of generating electricity. However, the policy support and incentives are not always there as young learners and teachers sometimes become frustrated by how sustainable learning environments are not prioritised as an educational commitment at national policy levels.

Democratising the school experience

There is a need to carve pathways for student agency, learner participation and democratisation in schools. This includes involving young voices, teachers as well as parents in the design of sustainable learning environments. It also involves considering how infrastructure, architecture and design can create engagement spaces for group work, teamwork, critical thinking, problem-solving and citizenship action. These are increasingly recognised as key learner competences needed to address sustainability. Sustainable learning environments need to be designed with participatory pedagogies in mind.

Joint-up efforts

The Eco-canteens initiative from the Canary Islands has been in place since 2013 with eco-canteens now available in all government schools (132 in total) across the islands. Much learning took place from implementing the initiative across a large network of schools that involved working with local farmers, delivery companies, cooks, kitchen staff, parents as well as teachers. These stakeholders belong to a Food Technical Committee that sources fresh local products, develops menus and reviews the canteens' performances. This joint up and connected approach was key to the success of this long-running programme.

Professional teacher education and development

Teacher education is crucial as educators need support to make the best use of educational spaces, buildings and external environments and to teach sustainability through example. This support needs to be technical as well as pedagogical as teachers potentially need to learn about food digesters, solar panels, water heaters, recycled water, biodiversity and botanical experiences on the school grounds to help advance sustainability in practice across schools.

Anchoring sustainable learning environments in the curriculum

Linking the lived experience in the learning environment with the taught curriculum is key to promoting sustainability competences. Establishing firm connections between assessed learning and the practical experience of sustainability in schools is proving difficult at this

point in time as most activities happen through after-schools clubs or via pilot initiatives. An exception was the Organic School Garden Programme from Murcia, Spain where over 252 schools are engaged in bringing this initiative into the core of the sciences and maths curriculum. Upscaling and anchoring learning in the curriculum are an important next step.

Policy support

Policy support is vital to enable schools and teachers to commit to sustainable learning environments. Within this context, Ministries should also provide schools with the autonomy to develop their own responses to sustainability and create sustainable learning environments that meet the needs of their students and locality. Equally, building policy learning opportunities for those leading the initiative regionally and nationally in this area is key.

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