Cyprus • A cross curricular holistic approach involving school, family and wider community

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ESD is at the core of the Cyprus Education System, and many reforms promoted within the National Strategy on ESD aim to integrate ESD in a holistic and comprehensive way in all educational levels. The National Strategy on ESD includes several policies which support its implementation in formal, non-formal and informal level. Main policies that support the sustainability- oriented education are:
The ESD National Curriculum constitutes a hallmark for ESD in Cyprus as it highlights the transition from the marginalised and occasional study of environmental issues in schools, to the holistic approach of these issues as a fundamental part of the educational vision and policy of each school in the country. The ESD curriculum's structure includes 12 thematic units (i.e. forests, energy, water, waste management, urban development, production and consumption, desertification, transport systems, poverty, culture and environment, biodiversity, tourism) of national, regional and global interest. The school subjects (modern Greek, maths, science etc.), operate as tools for an interdisciplinary- holistic exploration of the thematic units. The ESD curriculum has been allocated time within the timetable of primary education (Stages 1–4: two teaching periods per week [2 sessions of 40 min each] within the interdisciplinary area of "Life Education"; Stages 5–6: one teaching period per week [1 session of 40 min]). This time is to be used over and above the time used for activities within other curriculum subjects, so as to facilitate additional actions[69].

The ESD Curriculum is based on indicators and learning outcomes, which are differentiated according to the age of the students: All the indicators and learning outcomes in each grade (pre-primary and primary) are developed gradually on the axes of knowledge, awareness, skills, attitudes, values and participation/ action. The curriculum is developed in 6 main success indicators, 21 achievement indicators[70] and the learning outcomes for each thematic unit[71].

The enactment of the **Sustainable Environmental Education Policy (SEEP)** in pre-primary and primary education aims to integrate Whole School Approach in every school.

The SEEP is developed by the whole school and the entire school works together towards its implementation. It responds to the needs and particularities of the school unit and the school's immediate environment. The issues of the SEEP are agreed and everyone in the school engages in their exploration and study through the curriculum's thematic units. SEEP requires the cooperation with the community and the formation of collaboration networks with organisations and institutions. Its evaluation takes the form of schools' self-evaluation in pedagogical, organisational and social levels and the outcomes become the basis for its continuation in the long-term[72]. The integration of ESD in schools is supported by teachers' professional development on ESD, which is organised on both an obligatory and on an optional basis. For example, the compulsory education and training courses which focus on primary teachers' training for the implementation of the National Curriculum of EE / ESD are implemented centrally on an annual basis. In these courses, teachers are introduced to planning their school's ESD School plan (SEEP), to developing ESD lessons using the interdisciplinary approach, to using various ESD pedagogical techniques such as concept maps and moral dilemma, simulations[73]. An important innovation for ESD professional development in Cyprus is the introduction of professional development courses for newly appointed principals. Through these courses principals and deputy head teachers are guided on how to coordinate the development and implementation of SEEP in their school's context[74].

While policies and measures regarding ESD implementation have been adopted in Cyprus, challenges remain. For example, teacher incentives for working in a more systemic way on ESD is lacking. Moreover, despite the fact that schools are provided with a self-assessment tool aiming to help them to identify the degree of achievement of their SEEP, there are gaps and weaknesses. For example, an accreditation scheme that will certify a school that operates towards sustainability is missing.

Geroskipou A' Primary School is located in the Geroskipou municipality in Paphos province. The municipality has a population of about 8000 people and even though it is considered a rural school, it is near Paphos City. Most of the students are local, however there is a considerable number of students who are emigrants. This Primary school develops its own SEEP which has been implemented

through the ESD Curriculum since 2013, when ESD was officially introduced in Schools. SEEP is not developed in schools on a voluntary base, but it is a mandate. SEEP is long-term and usually is planned for 2 or 3 years.

Through SEEP our school investigates the biodiversity in Cyprus in relation with our culture. Our school pursues certain changes based on the specific objectives and actions that are identified in the SEEP assessment. This is on by all the participants (school and community) as pre-requisites for creating a school and community culture for protecting the biodiversity of our land.

For example, the following changes were made:

- **School organisation**: Establishment of material recycling system, stationery reuse, clothing recycling and, a vegetable garden was created and students take care of it. The vegetables produced in the school by the students with the support of their parents, are sold to the municipal market by the students. The money collected is used for replanting as well as for other school activities related to the greening of our schools and for further activities that will transform our school towards sustainability. Moreover, students participate in local agricultural activities such as helping locals to collect olives and carobs. These outdoor learning places make the learning process more attractive and meaningful to students.
- **Pedagogical techniques**: Our school incorporates innovative teaching approaches that are also promoted by the national ESD curriculum to enhance and facilitate indoor and outdoor learning such as brainstorming on relevant concepts with biodiversity. Also, field studies, problem solving role play, project-based learning activities, case studies and surveys are used.
- **Social skills**: Our school works together with the parents' association, the local community and non-profit organisations (like Akti Project and Research Centre) in order to fulfil the school plan for moving towards sustainability.

The schools' WSA approach • Partners (school, teachers, school personnel, community, NGOs...) come together to plan the school SEEP. At first, teachers guide students to identify environmental and sustainable issues that impact the well-being, the quality of life and the sustainability of their school and community. The issues are identified and discussed, and the participants in SEEP jointly agree on the issue that will be investigated. In the SEEP, justification as to the selection of the specific issue for study is provided, with reference to the reasons why it was chosen, its importance and the learning outcomes for the students regarding knowledge, awareness, skills, attitudes and competences. The SEEP is implemented by all the school. Each class (teachers with their students) organises its plan, which includes the way that the class is

Key WSA Principles in action at ***Geroskipou A' primary school***

Vision, Ethos, Leadership & Coordination

- School vision includes input from the wider community, promoting intergenerational communication and learning outside the class
- All the school plan developed jointly with the school, the community, and the professionals
- The Sustainable Environmental Education Policy (SEEP) in pre-primary and primary education, aims to integrate Whole School Approach in every school
- A WSA to ESD vision supported nationally by the government

Curriculum

- The national curriculum has an ESD focus including 12 thematic unit
- This is also connected to the SEEP initiative (above)

Pedagogy & Learning

- Project based learning - the community and its environment as a place of learning. In cooperation with municipal authorities, students, teachers, and parents worked together

Institutional Practices

- Utilisation of rainwater for watering pots and plants in the corridors. Every time it rained, we collected rainwater from the roof tabs in buckets and during the break, children watered the pots that were in a covered area
- The biodiversity park has sparked many behavioural changes in the school beyond the garden

Capacity building

- Peer to peer teacher training scheme
- Top-down support for example from - the Unit of Education for the Environment and Sustainable Development
- Parents teachers and professionals from the local community have been engaged with running workshops to support the primary biodiversity park the school manage

Community Connections

- meaningful relationships and cooperation among the school community and local society because of SEEP and the biodiversity park project
- The school with the community explored the issue "protecting the biodiversity of our land through the culture and civilization" – the outcome being - To create a green park for biodiversity next to the school which for its maintenance responsible is the school and the community together

going to work to contribute to the achievement of school SEEP (activities, subjects that will be used). The plan of the class is monitored by teachers and students. At the end of the school year, a self-reflection – self assessment – takes place for each class and for the school SEEP. This, based on qualitative criteria on organisational, pedagogical, technical, and social levels, operates as a tool for helping the school and the community to identify what has been achieved, what difficulties and obstacles emerged, as well as what remedial measures can be taken for more effective implementation of the SEEP.

The cross curricular approach reflected positively in our effort to apply a holistic approach in our SEEP. The interdisciplinary approach of the issue, in addition to collaboration with parents, children, grandparents and community members, facilitates the school to operate as an open community of learning to improve the quality of life in the school and in the community.

At the same time, we wanted to operate as an example of a school that apply ESD in everyday school life through the implementation of our SEEP. For this reason, we invited the students at the neighbouring school to our school, we presented them with our SEEP and we explained how we worked to implement it. We showed them our green corner, we explained in the field what plants we chose to include and why, how we work with the parents and local populations, and how they supported us to promote our products.

3 Ideas for a WSA in Action:

- Utilisation of rainwater for watering pots and plants in the corridors. Every time it rained, we collected rainwater from the roof tabs in buckets. During the break, children watered the pots that were in a covered area. We used leaves that fell from the trees of our environmental corner and other green materials for making compost and fertilising the pots and our herb garden.
- Establishment of a recycling system of various materials in the school. We bought recycle bins for each classroom and larger bins for the schoolyard. In collaboration with the community, these materials were collected once a week from the entrance of the school and transported to the Green Point of the Municipality of Geroskipou.
- Creating a vegetable garden. We needed a budget for fencing the area, for the purchase and transfer of suitable soil, for the purchase of tools and for the installation of an irrigation system. After this initial cost, the vegetable garden was cost free since the maintenance was undertaken by the children, teachers and parents. In addition, we used money from vegetable sales to fund any other expenses that came up regarding the vegetable garden and other school activities.

Vision, Ethos, Leadership & Coordination • The principal of the school supported and facilitated the development and implementation of SEEP. She allowed the internal changes in the school timetable to facilitate cooperation among teachers. The school principal supported all the activities that were planned and implemented, and also contributed significantly to the establishment of good relations with partners and the local community. Last but not least, was her role in securing the necessary financial resources to implement our actions. From our experience we learned that if you don't have an inspired principal with a vision and willingness to reorient his/her school towards sustainability, ESD and sustainability actions in schools cannot be collective and participatory and cannot be sustained.

Institutional Practice • Getting to know, preserving and maintaining the flora of our community in a sustainable way was our main goal. Students visited nearby areas with olive and carob trees, learned how they connect with peoples and local society. Moreover, they learned about traditional jobs, customs and traditions and traditional products concluding that the natural environment of their community contributed significantly to give shape to their local civilisation. Through this, students realised their own potential and responsibility in protecting their immediate environment in a sustainable way to deliver it to the next generations in the same way the previous generations delivered it to them. They learned and appreciated the intergenerational communication and interaction. Moving to a sustainable way of life needs time. Students managed to change certain behaviours. However, they still need to stay on track to maintain a sustainable way of thinking in order to incorporate its added value and transform their attitudes and actions towards the environment. For example, we noticed that they stopped leaving garbage nearby the vegetable garden, but garbage was still thrown at other places of the school. Moreover, even though they took care of the trees in the environmental corner, they did not seem to be interested in taking care of the other trees and plants in the school. On the other hand, we observed that the students that were more actively engaged in planting the vegetable garden, and they were more aware of protecting and taking care of their garden; they advised and urged their classmates not to cut flowers or plants for no purpose. So, even though switching to sustainability needs time, we were proud to notice that our students made their "leap of faith" towards it.

Capacity Building • Teachers had the chance to train with other schoolteachers that had expertise in the relevant subjects. In addition, we asked environmental organisations to provide us with professional development courses on specific issues such as planting. We also required the Unit of Education for the Environment and Sustainable Development to support us and guide us practically on

designing and implementing our SEEP. We organised various workshops in school with the engagement of teachers, parents and professionals who trained us in the field on agriculture and local crops.

Community Connections • Our local community is relatively small, so we had the chance to establish meaningful relationships and cooperation among the school community and local society. Municipal authorities support us in many ways such as transferring olives and carobs to the mill. Grandparents helped students to package olives in a proper way. The municipal workers also took care of the trees in our "Environmental Corner". Students were taught by local people about sericulture - to care of the silkworm from the egg stage through completion of the cocoon. Geroskipou municipality bought reusable bags for all the students to help eliminate plastic ones.

Curriculum • The curriculum of environmental education/ education for sustainable development defines and enhances the formation of the SEEP of each school. Our School SEEP was based on students' needs and interests. Each class followed the plan that was prepared by their teacher by choosing learning outcomes that were appropriate for their age and grade. We had the chance to self- reflect and self-assess our work process, to write down which outcomes were fulfilled, what obstacles we phased, and how we solved them. Moreover, the SEEP self-evaluation helped all the school to identify the next year's sustainability actions.

Pedagogy & Learning • Through project- based learning, students investigated the kinds of trees that exist in their area, their use and impact on their community over the years. We used our community and its environment as a place of learning. We learned the importance of collaboration to improve the quality of life in our school and in our community. In cooperation with municipal authorities, the students, teachers and parents planted trees in a nearby area. We adopted that area and transformed it to a place where people can feel the positive energy of nature. We gave the example experientially and in real situations of how an abandoned place can come into life and benefit the whole community.

Strengths, challenges, opportunities & threats • The holistic approach allows for interdisciplinary approaches. All the subjects are used as tools for integrating the learning outcomes of the ESD curriculum, which relates to the School SEEP assessment. A challenging issue encountered was to find a common time for teachers' coordination and for preparing and implementing joint activities. In this case, the school principal had to search for and allow changes to each teacher's teaching schedule that sometimes was not an easy procedure. An additional challenge was the in- service training of teachers. Teachers needed school- based training on how to practically apply various teaching practices in their specific school context and community. This wasn't easy to achieve because of the strict schedule of the school and other priorities.
The holistic approach requires a different way of school operation and reconsidering the teaching processes. Engaging the local community and parents in many of the school activities and actions wasn't always easy because of the schools limitations. Accordingly, activities outdoors, in farms, in local trades and in the municipal market needed time and very good planning, which sometimes was challenging. Furthermore, biodiversity as a subject connected with the culture of the community was a local

Elder generations teach youngsters to make olive pie / Parents, teachers, children and local authorities, collecting carobs

based issue. This demanded, the preparation of new materials based on the specific objectives of the SEEP, despite the existing educational materials on ESD. This could be seen as a burden because it wasn't easy for teachers, amongst other commitments in the school. One more challenge we had was the maintenance of our green yard, especially during the summer, when the school was closed. This challenge was overcome with the support of the local authorities which, in collaboration with the teachers and students, organised teams of volunteers which visited the school on a weekly basis to take care and do the work that was needed for sustaining our green corner.

Students need to realize their potential in transforming our world to a more sustainable place of life to have a positive impact on climate change and help our planet survive. This can only have a real impact on to their lives and encourage a better way of living for them and their environment if they are actively engaged in a meaningful way. We strongly recommend that students are actively engaged in developing of their ESD School action plan. It's important to give them voice and listen carefully to their needs, what they want to change and how they envision their school and their community in the framework of sustainability. Additionally, we suggest to our colleagues when they engage in School ESD plan development, to have their students in mind. The objectives and the intended outcomes must be feasible for the students. Another suggestion is to engage local partners or organisations that can help implement and monitor the action plan. In addition, it is vital for teachers to feel that they are not obliged to work for ESD. They must be self-motivated to engage actively. Supporting them in this direction is a critical factor for their empowerment and motivation.

Professional development and incentives are critical for WSA. We have to listen to students, and we have to listen to teachers. In addition, we suggest the SWAT analysis to identify strengths and weaknesses of the interventions and actions that are planned. Also, peer-learning and establishing networks of collaboration between neighbouring schools strengthen the idea behind WSA, which sees schools as an open community of ESD learning.

Strengths/Prospects

- All the subjects are used as tools for ESD in this example and this in turn strengthens teacher cooperation
- Top-down commitment from the national curriculum to support a WSA to ESD through the enactment of a Sustainable Environmental Education Policy (SEEP) in pre-primary and primary education, which aims to integrate Whole School Approach in every school
- Community connections – examples from this primary school show how the whole community can be involved

Challenges

- More work needs to be done – an assessment and accreditation structure for following up the ESD national curriculum and SEEP is missing
- Finding staff who want to take on the coordination role – this is a specific skill
- Organising the schedule so teachers can have the time to plan together
- Preparation of new materials despite a lot already being made available

Vegetable garden care