

103 A5

Recommendation for Practical Incorporation of EES-based Learning Paths in School Curricula

Introduction

This document is one of the results of the work developed within the **IO3 – Pilot study on student learning in entrepreneurship and sustainability**, which consisted of a pilot study on the efficacy of the Entrepreneurial Education and Sustainability (EES) methodology, integrating contents and practice in a multidisciplinary student learning in entrepreneurship and sustainability.

Here you can find a group of recommendations for practical incorporation of EES-based learning paths in school curricula, in secondary schools, as well as methodological and practical advice to exploit them, being the result of the feedback collected in IO3-A3 and the subsequent analysis performed in IO3-A4.

Entrepreneurial Education & Sustainability: How to Teach it?

Environmental education developed from the concern that human development was having profoundly damaging effects on the natural environment and its primary aim is the protection and conservation of the environment including natural habitats and ecosystems. Environmental education is concerned with those aspects of human behaviour which are more directly related to man's interaction with bio-physical environment and his ability to understand this interaction.

One of the most glaring problems which the world faces today is the environmental pollution. The human being has exploited nature excessively at the cost of the environment. There is an immediate need to make people aware about environmental degradation. Education and public participation may change and improve the quality of environment.

According to UNESCO, "Environmental education is a way of implementing the goals of environmental protection. It is not a separate branch of science but lifelong interdisciplinary field of study." It means education towards protection and enhancement of the environment and education as an instrument of development for improving the quality of life of human communities.

Thus, those are the objectives of environmental education:

- 1. Awareness:**
To help the social groups and individuals to acquire knowledge of pollution and environmental degradation.
- 2. Knowledge:**
To help social groups and individuals to acquire knowledge of the environment beyond the immediate environment including distant environment.
- 3. Attitudes:**
To help social groups and individuals to acquire a set of values for environmental protection.
- 4. Skills and Capacity Building:**
To help social groups and individuals to develop skills required for making discriminations in form, shape, sound, touch, habits and habitats. Further, to develop ability to draw unbiased inferences and conclusions.
- 5. Participation:**
To provide social groups and individuals with an opportunity to be actively involved at all levels in environmental decision making.

UNESCO has highlighted that the aim of environmental education is clearly to show the economic, social, political and ecological interdependence of the modern world, in which decisions and actions by different countries can have international repercussions. Environmental education should, in this regard, help to develop a sense of responsibility and solidarity among countries and regions as the foundation for a new international order which will guarantee the conservation and improvement of the environment.

Therefore, necessary steps for environmental education are:

- a) Awareness;
- b) Knowledge;
- c) Attitude building for motivating to protect environment;
- d) Evaluation of environmental measures; and
- e) Skill and capacity building

This means that any curriculum should be based on well-thought out and clearly defined concepts that one wishes the learner to acquire. Some important concepts of environmental education have interdisciplinary significance such as environmental pollution, carrying capacity, ecosystems, ecology, and conservation etc.

Having in mind the feedback collected in IO3-A3 and the subsequent analysis performed in IO3-A4, most partners have mentioned that:

It is evident that environmental, societal and economic problems challenge all human activities. Global crises, such as pandemics, immigration and climate change, are exacerbating the situation. What is the readiness level of the young people, students and societies in general to respond to these changes? How could students, in particular, be strengthened? These issues have been highly discussed in the context of entrepreneurial education. According to many scholars, entrepreneurial activity means, among other things, the ability to solve problems, seek and create new opportunities, utilize creativity, try new things, work together and innovate. It increases social-cultural, economic and environmental resilience.

As a consequence, it can help to promote actions that have a positive impact on the society. Then, the integration of entrepreneurship education and sustainability into teachers' training, irrespective of the subject and the level of education at which they teach, is crucial if high quality provision is to be made for students.

There is also an urgent need to re-examine the nature and structure of schooling in a more critical way to address ESD (Education for Sustainable Development) in its broadest context (i.e., school organizational principles, operational practices, school grounds management, and curriculum content).

Environmental Education, as it focuses on "problem situations" or "potential situations", may allow the interaction of teachers, disciplines, and the construction of convergent referential frameworks that enable, throughout the educational process, the construction of interdisciplinarity and understanding of the complexity of the contemporary world.

The school should be open to transformations of its traditional practice, allowing a wide participation of teachers in school planning and in the definition of the political-pedagogical project, and it should be understood that Education in the contemporary world should not remain closed to the school interior, but, on the contrary, should open to the community, being at its service and aware of its needs.

Education is currently a permanent and dynamic process, which takes place throughout the subject's life and requires skills and social responsibilities in permanent transformation.

The incorporation of Environmental Education to the school curriculum in a transversal way or through open educational projects, through projects that reach the community with the purpose of a greater knowledge of the students' socio-environmental realities, and that pursue the intervention and participation in the solution of local problems and their multiple interactions and determinations at regional, national and global levels, requires the joint work of the school collective, in order to integrate this vision in the pedagogical project of the school unit.

Teachers face then a paradox: Is education the problem or the solution in working toward a sustainable future? At current levels of unsustainable practice and over consumption, it could be concluded that education is part of the problem. If education is the solution then it requires a long and serious work, addressing needs to be considered to challenge existing frameworks and shift our thinking beyond current practice and toward a sustainable future.

The teacher should develop the ability to create strategies and methods of qualitative assessment appropriate to Environmental Education and suitable for the concrete situation of learning under consideration, in addition to enabling the participatory, interdisciplinary and cross organization of environmental problems and potential and the various disciplines involved in the study of the thematic core, from the teamwork, both by professionals committed to the development of the learning unit, as by students.

On the other hand, rapid technological, environmental, social, and workplace changes require innovative responses towards workplace skills and business development. In this context, transformative entrepreneurial skills and competencies are not only important for entrepreneurs in the classical sense, but also increasingly sought after by employers. These include problem-solving, initiative, teamwork, creativity, emotional

intelligence and other soft skills. Educational institutions are expected to emphasize the teaching of entrepreneurial skills and mindsets to prepare modern employees and potential future entrepreneurs.

A main challenge for embedding entrepreneurial learning in schools is the development of curricula that provide students with real-life, active learning experiences to acquire entrepreneurial skills. Subsequently, effective implementation of entrepreneurial learning requires providing support to teachers and trainers, who act as catalysts of change within educational systems. Finally, rethinking traditional pedagogical approaches and practices is needed to make teaching and learning entrepreneurship practical and relevant to real life. (UNESCO-UNEVOC)

An entrepreneurial mindset also includes attitudes of self-efficacy, motivation and perseverance, as well as valuing the ideas of others.

For entrepreneurship education to be effective in developing students' competences, the ability of schools to create supportive and stimulating learning environments is as important as the personal skills and motivation of educators.

Entrepreneurship education cannot take place in isolation from the world outside school. It may require working in partnership with external organisations in order to facilitate other modes of learning.

Linking Education to life, associating it to concrete objectives, establishing a close correlation with Society, and inventing or rediscovering an Education in close relationship with the Environment. It is in this sense that we must seek new paths. To learn to think in a free and critical way, to love the world and make it more human, to fulfil oneself through creative work, could be the way to build the society of the future.

Enterprise EES (Entrepreneurial Education and Sustainability) Learning Paths are then, useful tools and approach in what the development of sustainable and entrepreneurial skills are concerned. In secondary education, each school can decide how to implement them and may, among other options, choose:

- An offer as an autonomous optional subject
- The practice of co-adjuvanted, as part of a specific subject (entrepreneurship and sustainable education, for example)
- Functioning in juxtaposition with another subject

Tips for teaching about environment and sustainability:

- ✓ Create case studies and present them in front of the rest of the class, using digital devices to test their knowledge;
- ✓ Provide students with challenges based on real life problems;

- ✓ Allow the students to work in teams: this allows them to develop their skills in teamwork, project planning, leadership and sense of responsibility;
- ✓ Invite experts to come to your class to talk and work with the students: often they feel more involved and interested if they have someone from the field sharing their experience with them;
- ✓ Promote competitive activities: students like challenges and to compete with each other;
- ✓ Stimulate cooperation among students: they are fostered to share their ideas about each topic, and this contributes to their lateral thinking;
- ✓ Make the students feel that they are the main actors of their own learning and not deposits of knowledge – the more they seek, the more they know.

As teacher educators, the challenge is ours to accept or ignore. Success or failure, however, will also depend on attention from regional and national governments that set and fund educational priorities.

Conclusion

The challenges of teacher training for the process of incorporation of the environmental dimension in the curricula of Basic and Secondary Education drives the reflection about the characteristics of both teachers and students, responsible for the effective implementation of the process, and about the institution or school where the changes involving the activities of the mentioned social agents should be produced.

The teaching-learning process in Environmental Education is based on a complex and systemic vision of the environmental realities, conceived as problems and potentialities, aiming at the understanding of its inter-relations and determinations; at the same time, it considers the role and the characteristics of the institutions and social agents involved, located in a concrete time and space.

Therefore, ENTERPRISE course can be a good help in this process as it stimulates students to adopt a more qualified and conscious perspective on sustainability challenges and on the opportunities related to the integration of sustainability and entrepreneurship.